DR. EARTH®

GARDENING GUIDE

FOR THE ORGANIC LIFESTYLE!

What is vital for life?
Your Health

Fertile Soil:
The Essence Of
Healthy Plants

Tips, Basics &
All Around
Information

Home Grown
Nutrition

ProBiotic®
Nature's Intelligence
Pure & Simple

Natural Lawn Care

DR. EARTH

SOILS • NUTRIENTS • PEST CONTROLS

THE ART OF INNOVATION

Dear Gardening Friends,

I was an avid organic gardener for years when the seed of an idea germinated and burst through the depleted soil of gardening's status quo, to grow and blossom into my life's work. By 1991, the time had come for me to combine my scientific knowledge of plants and soil with my passion for organic gardening and human health.

I created a company whose philosophy and line of organic lawn and garden products would elevate organic gardening to a new level. It would shake up an industry and wake up a world made sick by unhealthy practices. I wanted healing for the soil that feeds people, for the people themselves, and for the planet. That's why I named it "Dr. Earth®."

NO ONE CAN CONTEST that I, Milo Shammas, invented the concept of infusing organic fertilizers and soils with beneficial soil microbes (probiotics), or that my innovative concept changed the face of gardening worldwide. The best part of this story is that although I invented a CONCEPT that was NEW, it was based on something as OLD as soil itself—the complex and amazing intelligence of nature, the balance of life that nature has maintained for millions of years.

Dr. Earth® leads the retail lawn and garden industry, creating cutting-edge natural/organic garden-friendly products. In fact, most of my competitors have attempted to copy my technology of ProBiotic®—the infusion of my proprietary microbes and mycorrhizae into organic fertilizers and soils. This flatters me. They too have learned, because of my leadership, that organics such as soils and fertilizers were ineffective, and responded too slowly, without the addition of beneficial soil microbes.

With my company's total commitment to clean and healthy gardening, I will continue to pursue perfection in every Dr. Earth® product. I take immense pride in everything that leaves our facility. And the reason behind all of it is you, my customer. It's a dangerous world out there, even in the garden. This has been my personal mission since the creation of Dr. Earth® and remains the mission of everyone in the family of people associated with my company. Dr. Earth® is far more than simply a job or a business to me; it is my contribution to the health of our environment and mankind.

I sincerely thank you for your support.

Milo Lou Shammas
Founder and Formulator- DR. EARTH®

Milo Shammas™

LIFE®
ALL PURPOSE FERTILIZER

Just Throw and Go!

CREATED FOR LIFE®

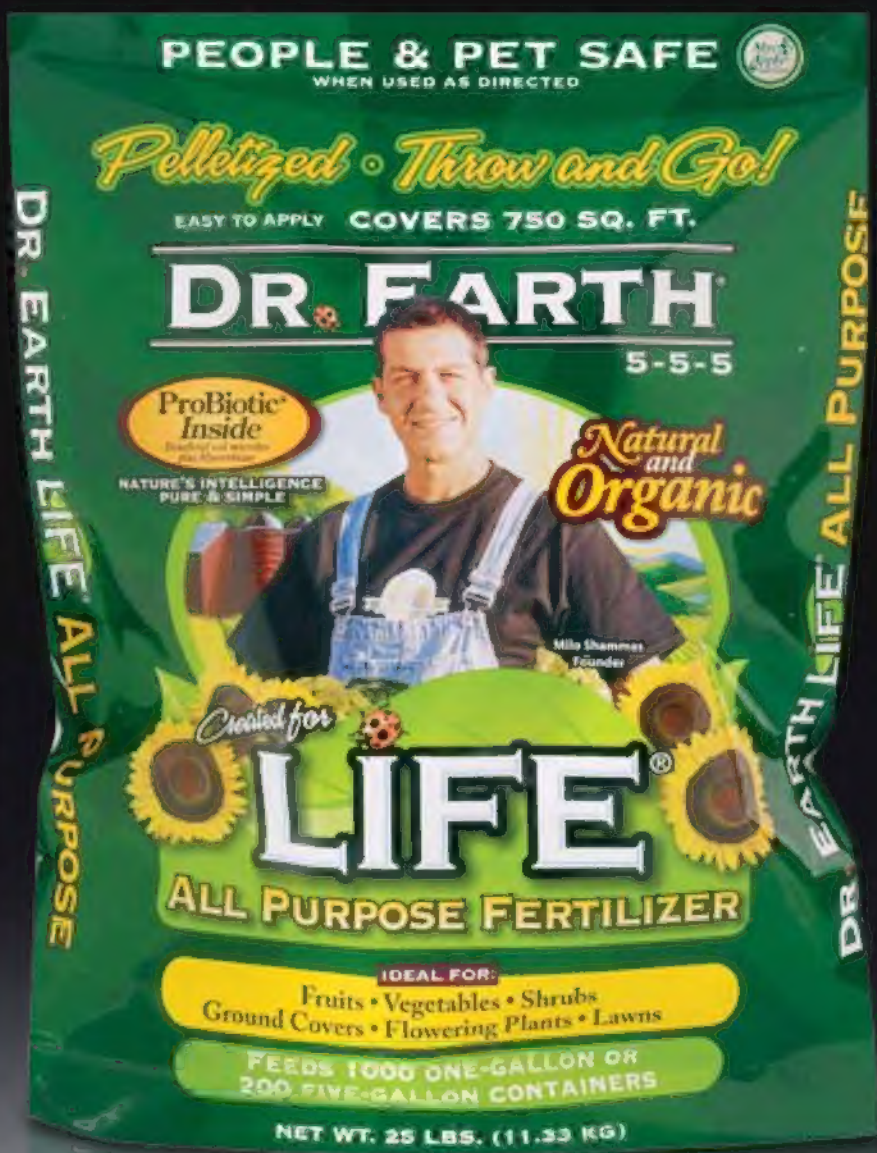
Life® is a true pelletized and homogenous organic all purpose fertilizer that produces remarkable results because nutrients are released quickly yet continue to feed for several months. Ultra-premium scientific formula provides optimum levels of primary essential plant nutrients, including micronutrients and multi-minerals. ProBiotic® ensures organic nutrients are thoroughly broken down then released in the soil for plant roots to absorb them as they are needed. Feeds for several months. Great for every plant in the garden. This is our easiest to use fertilizer and can be applied to the soil without having to be worked in.

THE POWER OF PROBIOTIC®

Only Dr. Earth® has ProBiotic®, the most complete "broad-spectrum" bio-active blend of Seven Champion Strains of beneficial soil microbes and eight select strains of ecto and endo mycorrhizae. Designed to work synergistically with the raw organic nutrients that make up the LIFE® formula, this spectacular blend builds soil health, promotes resistance to drought and disease, and assists growth, for remarkable plants every time.

100% NATURAL AND ORGANIC

NO GMOs – Chicken Manure – Sewage Sludge ("Biosolids") to taint the cleanliness of our handcrafted blend. Ideal for providing balanced and fast nutrition for all vegetables, flowers, bedding plants, potted plants, all trees, shrubs, annuals, perennials and even spot treating lawns.



Available in 4lb. 25lb. and 40lb. bags

EARTH2OCEAN™

VISION OF PURITY

Dive into the symbolism of our Earth to Ocean logo, representing the magic, beauty, and purity of this life-giving planet. Founder Milo Shammas designed it during a visit to Hawaii in August, 2011, inspired by the richness and complexity of that tropical environment and the truth that everything is connected. Dr. Earth® honors nature's connections with intelligence and integrity.

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RECYCLE AMERICA

Please always buy American products and support local independent businesses. Our future depends on it!

-Milo

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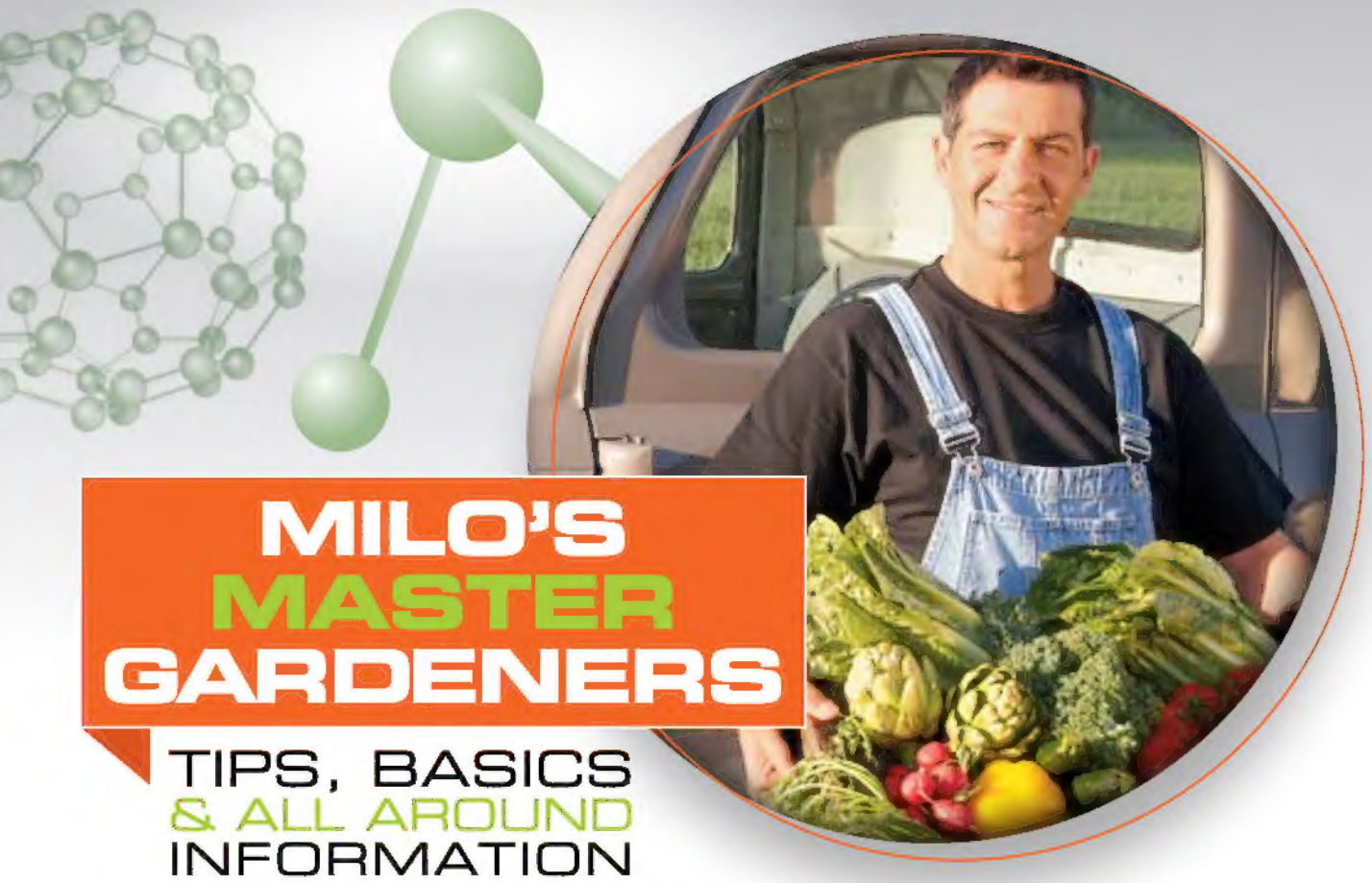


MILO'S MASTER GARDENERS

TIPS, BASICS & ALL AROUND INFORMATION

This magazine focuses on the large picture of a healthy lifestyle through growing your own food, but it helps to review the basics of gardening. While the information seems basic, especially for the seasoned gardener, even experienced people can benefit from a refresher on the basic information. A novice gardener certainly needs to know the material in this section.

You can succeed in growing your healthy garden no matter what your level of gardening experience. With some forethought, planning and sound information, you can get it right the first time. After all, this is science not magic. My approach is to give you the basics and show you how to garden in a healthy way.

This gardening primer is brief and to the point, lightly touching on what you need to know. If you want more education and preparation before you start, get a comprehensive manual or talk with a seasoned gardener. Good independent nurseries also have knowledgeable staff ready to help you, because it is good business to help aspiring gardeners. Perhaps join a local garden club, as they have some of the best minds and vast experience in your immediate area. Members will have many answers and guidance, and you will likely make new friends who share your interest in both health and gardening.

MICROCLIMATE *Know Your Backyard*

To succeed, you must understand your environment and become an expert on your natural surroundings. First, learn the usual dates of the first hard frost and the springtime thaw in your area. What you can plant and harvest depends on when your planting and growing season begins and ends and how long it lasts. Also, you must know where the sun rises and sets in relation to your planting beds. For example, you need to know how many hours of direct sunlight your plants can receive and where the shadows, if any, fall in the afternoon.

Next you must attune yourself to the annual and seasonal weather patterns in your area. Gardeners love a comprehensive weather report (rain, wind, high and low pressure and temperature extremes) because it helps them plan their activities. Note when seeds germinate and when insects (and which ones) begin to appear.

Invest in thermometers. A good quality soil and air thermometer with high and low capabilities will simplify your life and give you an edge in living with the elements

Your garden is likely to have small yet important microclimates. For example, hard reflective objects such as statuary or a shadow created in the afternoon might cause a cold pocket. Hot and cold pockets can interfere with a desired plant you have in mind. These areas will not only change daily but will evolve annually as you greet the different seasons. Summer might be bad for lettuce but great for tomatoes. Anticipate these changes when you decide where to grow your healthy garden.

You may have at least four different microclimates around your home:

- A hot side facing South
- A shadowed, cool side on the North
- A warm western side with afternoon sun
- An ever-changing eastern side that may be warm or cool depending on trees, high fencing or the time of year

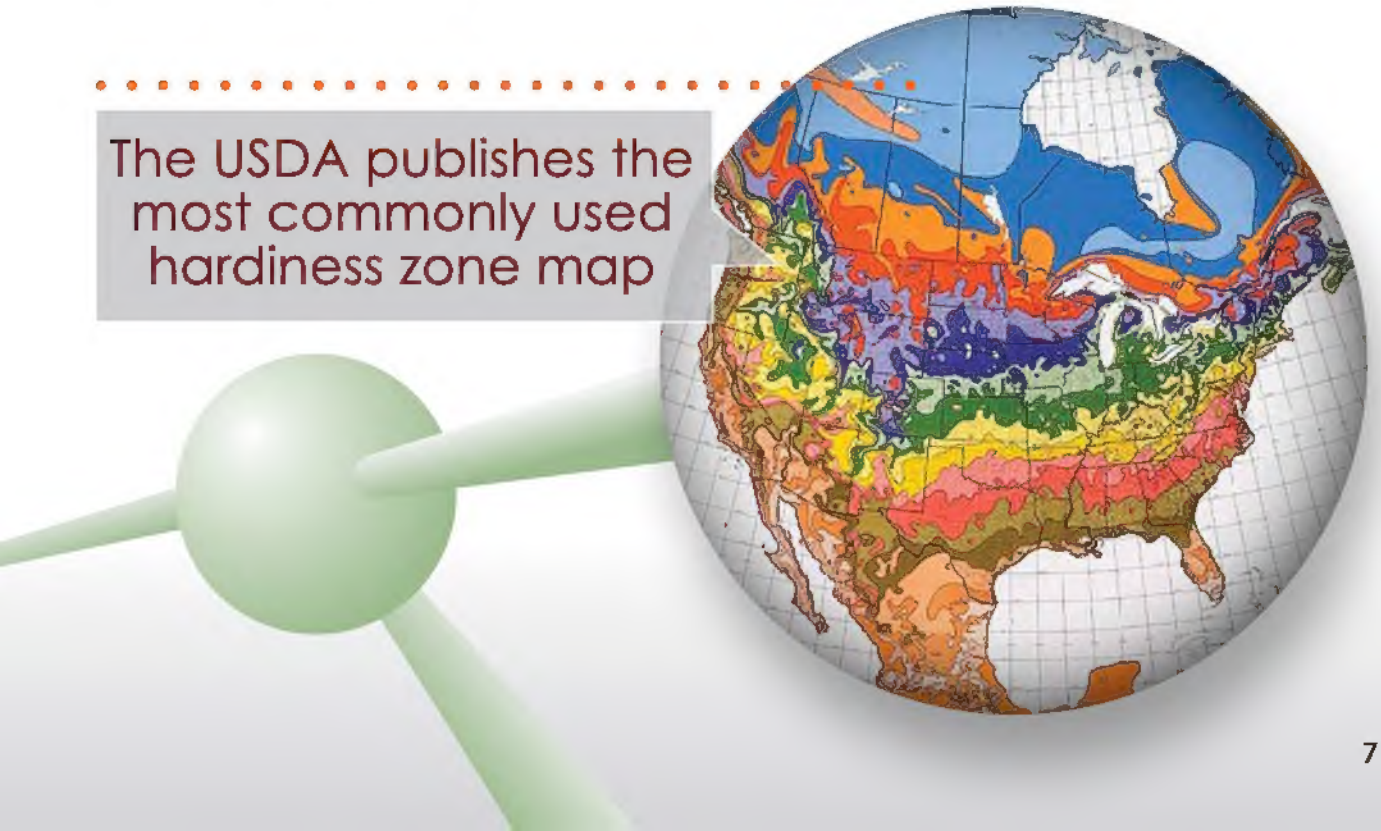
Carefully observe heat and light to know where to create your healthy garden. Position your raised beds, rows or plots to run north and south so plants will receive more sunlight in winter. In winter, too, keep tall trellised plants against the north wall and the shorter plants to the south. In the summer, do the opposite. There is much more to know, but these are the basics of microclimates.

PLANT ZONES *What and Where to Grow*

We decide on a plant's ability to thrive in a certain area according to its geographic climate zone. The USDA publishes the most commonly used hardiness zone map, which divides the continental U.S. into 11 zones. The zones are derived from the average annual minimum temperatures, from zone 1 (-50°F) to zone 11 (+40°F). You can find a copy of this map online or at a local library or university. Many independent nurseries have books that clearly describe the different zones. You can also just visit your neighborhood nursery. If you see something there you like, almost certainly it will work in your backyard. Especially when you grow from seeds, you need to pay close attention to your zone map.

Another good zone map comes from the editors of Sunset Magazine. They divided the United States and Southern Canada into 45 climate zones, considering many variables. It looks at many area temperature extremes, as well as humidity, rainfall, local topography, elevation and even proximity to large bodies of water. However, visiting your local independent nursery and selecting the plants they carry will serve you as well as the very best zone map. Nurseries want to stock and offer plants that will thrive for their customers. Withering plants are bad for business. Your success is also their success.

The USDA publishes the most commonly used hardiness zone map



a healthy lifestyle through growing.

If you buy seeds and plants from catalogues, invest in a Sunset reference book. Besides the climate zones, these books have a complete description, often with color photographs, of every plant appropriate for your region. These comprehensive books are also fun to browse through to get ideas and inspiration for your next garden project.

SUN AND SHADE *A Defining Factor*

To grow plants that produce fruits, make sure you have plenty of sun. Allow at least six hours daily for tomatoes, cucumbers, zucchini, peppers, beans, corn, eggplant, summer squash and cabbage. In general, the bigger the fruit, the more sunlight it must have.

On the other hand, many vegetables and herbs do well in shaded areas. You can grow them with about four hours of daily sun. In these areas, try carrots, beets, chard, cauliflower, chives, lettuce, chicories, radicchio, arugula, basil, mint, parsley, spinach or winter squash. A good rule of thumb: If the plant is a leafy green vegetable, less sunlight is fine.

Here is a small biology lesson. Sunlight creates sugars through photosynthesis. More light creates more sugars. Less light and fewer sugars are fine for non-fruiting plants. Herbs are great for shady areas. Many healthy plants will grow regardless of the sunlight or shade your garden receives.

DRAINAGE *Get the Wet Out*

Most fruits and vegetables need a good balance of rich organic materials to grow to their full potential. This means they require plenty of air space between soil particles while also being able to retain moisture. Most garden plants like both air and moisture around their roots in order to drain well. If you can thoroughly wet the soil and have the moisture drained relatively quickly, that is a good sign. If that same soil can stay a medium moist, not sopping wet, for a few days, you have good drainage.

Raised beds give you total control of soil composition

Organic materials usually help make for great drainage. The structure of the soil has a lot to do with the drainage. If you have a good balance between sand, silt, clay and organic materials, you have a solid foundation for good drainage. Good drainage brings good results, including reducing fungal pathogens in the soil, better root development, a healthy aerobic environment and better nutrient availability.

In brief, in sandy soils, water drains too quickly. In clay soils, water drains too slowly. Adding organic materials helps correct and balance both types of soil. Do a simple test to see how your soil drains and whether you have to make changes to correct your drainage. Dig a hole about 1 foot deep and 6 inches wide. Fill the hole with water and let it drain completely. When the hole is empty, fill it again with water to the very top. If it takes more than 10 hours to empty again, you have a drainage problem. The good news is you can fix the problem several ways. You can add organic materials. You can add drainage pipes to direct the water away. You can also grow plants in raised beds. I love raised beds. Read on to learn why.

RAISED BEDS ELEVATE YOUR GROWTH

I love to grow plants in raised beds for many reasons. They make it easier to plant and harvest crops. Aesthetically, they are beautiful when constructed handsomely with a sense of design and purpose.

Raised beds also give you total control of soil composition. The soil you use to fill the raised bed can be full of life with composted organic materials rich in humus and full of nutrition. Crop yields typically improve a great deal in raised beds. I have seen crop yields increase as much as 42 percent compared to typical planting directly in the ground.

Raised beds also address drainage. They make your garden less dependent on the variable drainage characteristics of your native soil. Even more importantly, the native soil might be poor and have little nutrient value. What if the previous homeowner had no regard for soil health or the environment and dumped his motor oil or other toxins directly on the ground you intend to use? You might be afraid to grow any crops in it except ornamental plants; a raised bed gets around that problem. A raised bed looks great and makes the statement, "I am a professional gardener."

After you build the beds, you may find it easier to start on projects in one bed at a time. Focus on one area every day or weekend so you are not overwhelmed by the entire garden. Beds are easy to weed because the soil is light and fluffy. Since raised beds are knee high, planting causes less back strain. Plants in raised beds do not compact. Because you are not walking on the area where they grow, plants in raised beds grow better with more air circulation.

When constructing your raised bed, you can use brick and mortar or natural looking stones with mortar. I love using hay bales, which look cool and organic. Hay bales form a raised bed instantly and are the perfect height. If you want to frame a wooden bed, use redwood or another hardwood that has not been dipped in chemical wood preservatives. Pressure treated wood is loaded with toxic heavy metals. Do not use painted wood, as the paint will eventually decompose and contaminate your soil. Finally, do not use cheap plastic, instant beds. They look temporary and unprofessional. Unless you live on the go, construct a real bed built to last.

3 EASY STEPS FOR HEALTHY PLANTS
DR. EARTH
Recipe for Success
WHEN PLANTING CONTAINERS
FOLLOW THESE THREE SIMPLE STEPS
STEP 1 Plant
STEP 2 Provide
STEP 3 Protect
MIX SOIL
One bag of soil will fill 3 five-gallon or 15 one-gallon containers - providing healthy soil for maximum plant growth.
FERTILIZE
Feed your plants at time of planting, then every 6 to 8 weeks to maintain large, abundant & healthy plants.
SAFEGUARD
Protect your prized plants. It's easy to safely control nasty bugs and disease. Just spray the problems away.
ProBiotic Inside
Beneficial soil microbes plus Mycorrhizae
NATURE'S INTELLIGENCE PURE & SIMPLE
PEOPLE & PET SAFE
DR. EARTH
Pot of Gold
PREMIUM SOIL
ORGANIC
100% Natural
Hand Crafted Blend
ALOE VERA
& YUCCA EXTRACT
JUST SO ORGANIC
DR. EARTH FINAL STOP
DISEASE CONTROL FUNGICIDE
DR. EARTH FINAL STOP
YARD & GARDEN INSECT KILLER
PEOPLE & PET SAFE
DR. EARTH
PREMIUM ORGANIC 7 ALL PURPOSE FERTILIZER

6 FACTORS

6 Factors To Consider When Planting In Containers

Sunlight • Container Size • Potting Medium
Fertilizer • Trellising Support • Watering

CONTAINER GARDENING

6 FACTORS TO CONSIDER WHEN PLANTING IN CONTAINERS

You can grow enough organic fruit, vegetables and herbs on a 4-foot by 8-foot balcony to satisfy your hungry appetite. Space may be limited in your garden. Perhaps you live in an apartment. Or you may not want to invest a lot of time in a full scale garden. Whatever your situation, you can still enjoy produce you grow within reach of your kitchen. Using containers to grow organic edibles is rewarding and easy. Container produce can give you nutritious, tasty and visually pleasing organic plants. Nothing tastes better and is healthier than a few fresh herbs, vegetables or fruits from your garden. Put them in a salad within minutes of harvest when they contain the most nutrients and are full of flavor.

Pay close attention to a few important rules, and you will need to invest only minimal time to enjoy an abundance of organic and healthy fruits and vegetables. You must consider five factors before you plant your organic container garden. Considering these variables will allow easy set up, maintenance and harvest of a productive container garden. The five variables are sunlight, container size, potting medium, fertilizer and trellising support.

1 SUNLIGHT *Light is Energy*

Sunlight is the most important factor to consider. Too little prevents your plants from converting enough sunlight energy to produce fruit of real value. (On the other hand, some herbs grown specifically for their foliage do fine with less sunlight.) Track the sun and shade patterns in your immediate area to get a good sense of the space where you intend to garden and what plants will do well there.

Here's a simple rule: Fruit trees and vegetables that set flowers (such as oranges, plums, tomatoes, cucumbers, eggplants, peppers, or squash) need a lot of sunlight. Photosynthesis produces sugars that directly feed flowers and help grow fruits of appealing size, taste and nutritional value. A good local nursery has staff people who can help you understand the sunlight you need for the kind of plants you can grow in your region.

2 CONTAINER SIZE *More Soil Equals More Nutrition*

The second most important variable for container gardening is the size of the container. The more soil volume your plants have, the more extensive the root system that can draw on a larger pool of nutrients and water. Available container space directly influences the nutritional value, size and quality of the fruits, vegetables and herbs you will harvest. More is definitely better. For example, tomatoes require a minimum of 15 gallons of soil in order to develop into full size plants with rewarding taste and nutrition. Other vegetable crops can survive in smaller containers with less soil volume. They still benefit from more soil by producing larger, more bountiful crops in a larger container.

The type of container you use can also make a big difference in growth and quality. Terracotta containers are a good choice, because they breathe with the soil and do not fluctuate quickly with extreme temperatures. Redwood is another good choice that also breathes and retains moisture longer. Plastic containers, which come in a great variety of styles, work fine but will require more watering than thicker, denser pots. With plastic containers, you must use mulch to retain moisture. Use mulch with all containers. Plants in small containers will dry out quickly, so keep a close eye on these pots. In general, less plant foliage requires less regular watering. A larger plant needs more water. Pay close attention to all your plants, and water them regularly as needed.

3 POTTING MEDIUM: *Premium Quality, Better Nutrition*

Soil is the source of life for every living thing on earth. Healthy soil produces a healthy crop. The type of soil or "potting medium" you choose has a large effect on your plants and their ability to produce an abundance of large, nutritious fruits and vegetables. If you have a potting soil that gives you good results, stay with it. Chemicals are common in many bagged potting soils. Make sure your bagged potting soil contains no chemicals such as synthetic plant nutrients or chicken manure & biosolids.

Potting soil is different from composts or planting mixes. It can be difficult to formulate. Getting the balance right is the key. You want potting soil to drain fast to prevent root rot, but you also need the soil to hold on to enough moisture to support a healthy transfer of nutrients to the root. Pot of Gold® is the best & is clean and pure.

Use some of that compost from your kitchen and yard waste. It makes a good component to mix with the potting soil. A good formula is about 1/3 compost to 2/3 potting soil. Do not skimp on the soil, as it is the only source of nutrition for your edibles. If the soil is poor, the nutrient value will be poor. A plant grown in a container is like a caged animal, it eats only what you feed it. Container plants do not have the luxury of drawing nutrients from the native soil. Therefore, spend a few extra dollars for the best soil available.

4 FERTILIZER *Feeds the Living Soil*

You must feed the soil that feeds your plant root systems. Chemically fertilized soils are low in organic matter, which helps conserve the soil and its moisture providing insurance against drought. Soils lacking organic matter are more vulnerable to drought and to extreme climate changes.

Fruit trees, tomatoes and most other vegetables, especially in containers, need a lot of fertilizer to reach full potential. Roots in containers cannot tap into food reserves the way they can in natural soil. Because the plants receive only what you give them in the container, it is especially important to use the best quality organic fertilizer. Feed the roots in your container plants slowly with the best organic fertilizer to harvest the maximum amount of nutrition from your plants. Sea based organic fertilizers are superior and contain the most multi-minerals. You will benefit from these nutrients as you consume your harvest. Healthy soil leads to healthy food. Feed containers every two months throughout the year to maximize the plant's potential. Because the plant is in a confined space, it will use all of the nutrients quickly. Keep container plants on a regular feeding schedule. Rich, tasty and nutritious vegetables are just outside your kitchen. Enjoy.

5 TRELLISING SUPPORT *Form and Structure with Better Health*

Exposing as many leaves to sunlight as possible helps to increase your harvest. Some of your vegetables will not require any support at all, but cucumbers, tomatoes and other vine plants need support to keep them off the ground and growing in the desired location.

Air space between your plants is also important to help minimize fungal diseases. Air space also encourages beneficial insects to do their pollination work more easily by making flowers more accessible. When you buy your trees or vegetable transplants, ask your nursery professional what he recommends. Some plants may need a stake in the center of the container, while a tomato wants a sturdy cage, and a cucumber needs a grid like trellis. You can build many of these support systems from scraps around the house. Like a well assembled product that looks good. Some gardeners prefer a grungy and scrappy look. Plants do not know the difference. Just give them a shoulder to lean on.

6 WATERING *Wet Your Whistle Just a Little*

Every living organism needs water. Most plants are 90 percent water. The task of delivering water from the soil to the plant is considerable. Sixty percent of water is absorbed by plant root hairs. To keep your plants healthy and thriving you must have a good soil with plenty of organic matter to act like a sponge and allow the almost microscopic roots to travel through porous, well draining soil. Organic matter allows the soil to breathe with a good ratio of minerals that holds onto water.

When and how often should you water? No set watering schedule can be prescribed. The only schedule to go by is the one that literally feels right. I have studied many plots of land supporting many different crops. Whether growing an annual vegetable crop or perennial walnut trees that are 30 years old, I have drawn the same conclusion: you have to water when it FEELS right to you.

The best way to tell when and how much water your plant needs (whether in the ground or a container) is to feel the soil. Probe your finger about an inch or two and feel if it is dry or moist to the touch. You can buy a water meter at your local nursery. They work, but I feel closer to the soil and my plants when I touch the soil with my bare hands.

When a reference book says something like, "Water every three days in the summer and cut back to once a week in the winter" I am amazed and disappointed. I wonder: has the author ever been a farmer and paid attention to the watering needs of plants? The soil type makes a huge difference. Also, the more organic material in a soil, the less you have to water. The hotter the day and the shallower the root system, the more you have to water. I could go on and still not cover all the unique watering needs of the plants in your backyard or in a container. Gardeners should pay attention to soil, weather, dryness and humidity. You must base your watering decisions on observation not rigid rules that may not apply to your environment.

Do not set your sprinkler system solely based on what your gardener tells you. You might need to change those sprinkler timers once a month depending on weather conditions. Otherwise, you may waste water. Best for your plants is to get just the water they need when they need it. Inspect your soil. Look at it and feel it. If it looks and feels dry, you may need to alter your watering schedule.

Watering in the morning gives your plants the entire day to draw the water from the soil as needed, especially on hot days. Water slowly to insure proper absorption. Water deeply so that it does not run off the surface, never making it down into the root zone. Plant roots are sunk down deep in the soil where you cannot see them. Pay attention to shady spots. They need less water, while the sunny areas dry out more quickly and need more water.

Exposing as many leaves to sunlight as possible helps to increase your harvest

Air space between your plants is also important to help minimize fungal diseases

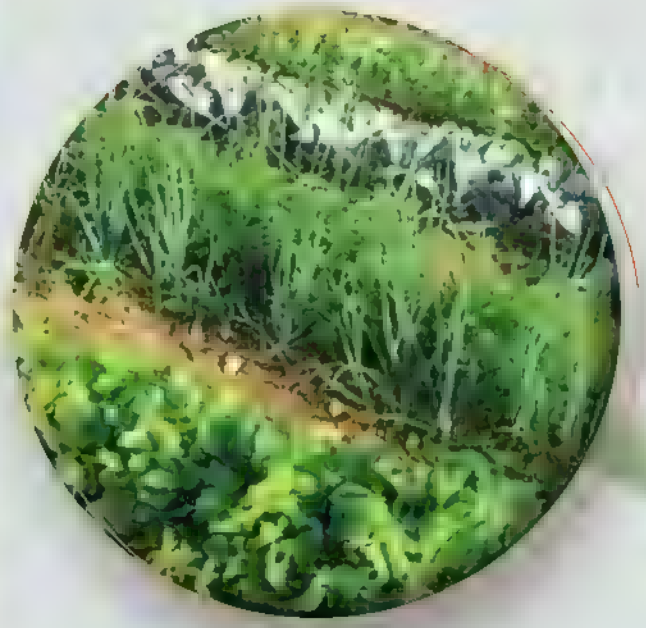
Let's Make a Plan

Before a contractor can build a home, the architect must provide a plan, a blueprint that clearly shows how the house looks and functions. The same is true when creating and designing a garden of any size. You must know how to put it together. Some questions to consider and answer intelligently:

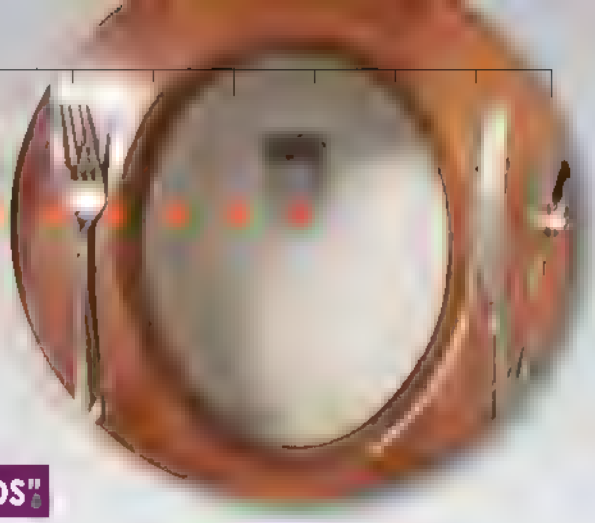
- Will you start from seeds or transplants?
- In-ground or raised beds?
- Sprinkler system or hand irrigation?
- Fruits, vegetables or both?
- How will the elements of your garden work together?
- What are the sun requirements for your plants?
- Where will the same plant go next year? (Rotate crops each year to avoid plant diseases.)
- What plants are you going to grow in summer, winter or fall?
- What is the best soil mixture for you?
- When will the transplants go in the ground?
- How hardy are the plants you want to grow?
- When should you start them?
- What is the nutrient value of a desired plant?

Remember you are growing a nutrition garden. You will have a health food store right in your backyard. Make sure to invest time planning it.

I love to dream about how a garden will come together. A solid plan brings you that much closer to your dream garden. The possibilities are endless when we put dreams to paper and act on them. When your dream is realized in your garden, your harvest tastes that much better. There are thousands of books on planning your garden. Pick one up and get more ideas. You can never have too much knowledge about your garden and your health.



FROM TOILET TOTABLE



SIT DOWN AND HAVE A HELPING OF "BIOSOLIDS"

We come to gardening with BIOSOLIDS. That's a nice name for treated sewage sludge that comes from anything and everything that has been flushed down a toilet, dumped in a sink drain, or run through a garbage disposal, including unimaginably nasty waste from industrial plants, hospitals, slaughterhouses, and more. Anything and everything. Pause for a moment and think about that.

As the world's population increases, so does the amount of human, animal, hospital, industrial, and food processing waste. Sewage treatment facilities produce huge quantities of sludge—over 7 million dry tons per year. Somehow, it needs to be dealt with. The Clean Water Act of 1972 meant sewage had to be treated and not just dumped, which was a good thing, but then it started accumulating. Promoting it as a fertilizer for agriculture was a cheap and easy solution one you might be part of, convinced that you're doing the right thing when you take home bags of soils, composts, or fertilizers from your local sewage treatment plant or distributors, to spread on your yard or garden. Or maybe you've had a whole truckload delivered. After all, you might think of it as "natural and organic." And it's true that biosolids do offer nutrients for plant growth, and they can be obtained for little or no money.

What's to worry about? We are told time and time again that biosolids are safe. But who has been telling us this? The endorsement comes from those involved with the sewage and waste water treatment industry, and the U.S. Environmental Protection Agency, even though the EPA's own website raises concern. In 2009, the EPA collected samples of treated sewage sludge from 74 randomly selected publicly owned sewage treatment plants in 35 states and compiled the Targeted National Sewage Sludge Survey Report. The results revealed the presence of "four anions (nitrite/nitrate, fluoride, water-extractable phosphorus), 28 metals, four polycyclic aromatic hydrocarbons, two semi-volatiles, 11 flame retardants, 72 pharmaceuticals, and 25 steroids and hormones." Some think of "biosolids" as an improvement on the smelly manure that has been used for centuries, but this stuff is nothing like what a cow produced back in 1700.

HOW THE EPA PROTECTS (?) US

In response to the Clean Water Amendments, the U.S. Environmental Protection Agency created an amendment to their regulations, titled "The Standards for the Use and Disposal of Sewage Sludge," (Title 40 of the Code of Federal Regulations [CFR] Part 503) effective March 22, 1993. "The Part 503 Rule," as it is now called, presents criteria for use, testing, storage, and disposal of treated sewage sludge, with the assertions of its relative safety based on assumptions about compliance with these rules. Take a look at Chapter 6 of the EPA's "Plain English Guide to the EPA Part 503 Biosolids Rule."

Unfortunately, most citizens don't bother looking into the matter and just accept what they are told. Extremely effective public relations and marketing campaigns convince the public that using these products is the environmentally responsible and economical choice. Consequently, both commercial farmers and home gardeners are being duped into helping to solve a disposal problem of horrific proportions.

Even when you buy popular bagged soil products labeled "organic," you might not really know what you're getting. ("I Never Promised You an Organic Garden.) Even while certain consumers knowingly and willingly use biosolids contained in cheap or free soils and fertilizers that come from waste treatment facilities, it's highly disturbing to realize that other products in retail outlets, thought to be safe, have been purported to contain sludge without you knowing it, when the label lists "compost" as an ingredient.

The point is that we just don't know enough about the long-term consequences of using biosolids. The Center for Media and Democracy's Food Rights Network is involved in the fight, trying to educate the public about the dangers and deceptive practices carried out under the guise of recycling. But many other groups and individuals have sounded the alarm for years and have used startling methods to gain attention. (See "Sludge Happens" and the CBS news story, "Shockingly, Toxic Waste Candy Bars Deemed Unsafe" and the recent article, "Food Sunday – I Dare You, Put Sludge in Your Mouth.")

For those nervous about a technology with too much potential for unwanted consequences, the choices of what to do about it may seem depressingly limited in the face of the volume of biosolids burdening the planet. If we are ever going to stop this nightmare it will require educating the public, speaking up and speaking loudly.

Written by Candace Brown

Please read Candace's entire blog at:
http://goodlifenow.blogspot.com/2011/05/from-to-let-to-table-sit-down-and-have.html

CAN YOU SAY "CHEAP CHEAP?"

CHICKEN MANURE IN "ORGANIC" FERTILIZERS AND SOILS

For the same reason that "sewage sludge" was deliberately renamed as "biosolids," plain old "chicken manure" has now been linguistically elevated on the labels of bagged "organic" soils and fertilizers. And the reason is simple; when you have an excess of something, clever marketing helps dispose of it. Whether you call it "poultry waste," "composted chicken manure," "dried poultry waste," or "poultry litter," chicken manure is still the same old inexpensive filler, with a new twist: a growing list of environmental concerns.

I believe there was a time when manures — like steer manure and chicken manure—were actually very good ingredients to use in the garden. But those days are long gone. Today's consumer demand for inexpensive poultry has created a dangerous new world when it comes to raising chickens, and it does not even remotely resemble the picture most people have of chickens roaming freely in a farm yard, pecking on the ground for bugs and small plants. And the changes that have come about mean chicken manure is nothing like what it once was either.

Today's commercially raised chickens—living creatures with as much right to a healthy, natural life as any others—spend their brief existence in unsanitary and grossly inhumane conditions on factory farms called Concentrated Animal Feeding Operations (CAFO). The people running these operations don't have to tell us what they feed the chickens they raise. It is not unusual for factory chickens to have a little arsenic added to their feed, as arsenic promotes growth and gives the meat a certain color that consumers have come to view as "healthy."

Condemned to Die—Prison Camps for Chickens

Since these birds must reach a marketable weight in a mere six to eight weeks, they are pumped full of hormones, growth enhancers, and of course, antibiotics. When chickens live their lives confined to small spaces, diseases flourish. And in order to control the inevitable pests and the spread of diseases that could result, their environments must be sprayed heavily with chemical pesticides. Back in the days of our great-grandparents' family farms, many of these chemicals hadn't even been invented.

Such concentrated populations of chickens produce huge accumulations of manure, scraped off the floors of the buildings periodically, but usually not until a deep layer forms. The material collected contains manure solids, urine, feathers, and more, including all the chemicals chickens ingest and are exposed to.

If you think of chicken manure from factory farms as still being a natural, nutrient-rich addition to garden soil, you are mistaken. By the time the feed (already unhealthy) passes through the chickens' bodies, it has potentially been contaminated with pathogens such as E. coli and salmonella. Then it sits in huge piles near the fields where it will eventually be spread, exposed to the elements. Pollutants like arsenic, E. coli, and fecal coliform bacteria end up in the runoff after heavy rain or snow melt and ultimately reach nearby ditches and streams. And they enter more than just bodies of water; these pollutants can enter your own body as well, when contaminated manure is used for food production. No wonder we keep hearing about food recalls. They are directly related to this unsafe situation.

Poultry poop pays off in manufacturers' profits

If you spend $5-$10 for a 4-lb. bag of "organic" fertilizer, and most of it is chicken manure, you have just wasted your money. If it is chicken manure you really want, save yourself a fortune, and simply buy a 40-lb. bag of pure chicken manure for less than five dollars. I am really disappointed when companies take advantage of consumers by selling certified organic fertilizers masquerading as premium fertilizers, when their fertilizers are formulated with chicken wastes as the base. If I wanted to, I could buy 2,000 lbs. of chicken manure from a factory farm for about $50, even less from others, if I committed to a truck load—which is what large scale fertilizer manufacturers buy. That comes to ¼ of a cent per pound. Then some fertilizer manufacturers turn around and sell a 4-lb. bag for $8, when 50% of its content is chicken manure.

This seems like an unethical practice, in my opinion. Frankly, it's robbery. The worst part is that this far-from-natural manure—with its high potential for dangerous contamination—is actually allowable by "organic certifiers" as a usable ingredient in bagged organic soils and fertilizers! That is no bargain, at ANY price. Read the labels on bagged organic fertilizers and make sure you are getting what you pay for!

What is vital for life?

What is vital for life? Your health. The future of your health is imminent. To live a long life full of joy and vitality, your lifestyle choices today determine the state of your health tomorrow. This is true, whether we think about those choices or let ignorance and apathy make them for us.

The great news is you control your own destiny, because you control every decision in your life. Healthy eating and living are personal life choices. In your own backyard you can find the potential to create a future of good health for yourself, your family and the entire planet. This is the start of your journey to a better life.

To create an environment that nurtures you and provides you with enjoyment and health, you need a detailed plan similar to a road map. My mission is to help you plan and take this wondrous journey.

Being healthy is simple if you understand how to garden in your own backyard. Growing your own healthy food right outside your door will make you look at your home in a new, wonderful way. With so much excitement running through your veins, your enthusiasm may push you to act too soon. Before you grab a piece of paper, scribble many ideas, run down to your local plant nursery and buy as many seeds, plants, soils and fertilizers as you can load up, let me guide you from my 20 years of experience and leadership in gardening. I want to teach you what I know that is true and effective.

LET'S GET DIRTY FIRST!

Some people think of soil as nothing more than an anchor that holds plants in the ground, a dark, dusty place that critters crawl in that makes our hands dirty. Soil is not just "dirt" but the basis of all life. Healthy soil is alive with billions of microbes that feed all living things on our planet. Your body needs it to be healthy. It provides you with the sustenance you need to generate the energy for everything you do. Everyone who is alive today and everyone who ever lived, needed the benefits of soil to survive and prosper.

Soil health is the fundamental basis for the health of all plants, animals and people. This guide shows you the link between soil and human health. The connection is simple: Healthy soil creates a healthy garden, which produces healthy plants to provide nutrients for us, for the animals we love and care for as pets, as well as the plants we consume as food.

Why should you grow a vegetable garden? Food is so cheap and easily accessible if you live in a modernized country. Much of what we can buy is more convenient to prepare than cooking garden produce from scratch. I can run down to a fast food drive-through and grab a value meal (for about $5) that is 2,500 calories of deep fried, grease-laden, processed food. You can get your fill of genetically modified, processed meat and potatoes for far less than one-tenth of a penny per calorie.

Maybe you do not care if that hamburger came from a cow fed with genetically modified grains and was shipped 2,500 miles to get to you. Maybe you believe it makes no difference if your fries are processed and grown with genetically modified potatoes. Your 32-ounce soda was full of simple sugars that went down smoothly with those salty fries.

Is a barga n meal a bargain if you pay for it w th your hea th?

Why you should garden It's good for your hea th Besides g v ng you the best nutr ents you can get, garden ng is hea thy work You have to cult vate the soi , amend t, p ant seeds or cutt ngs, fert ze, water, weed and mulch Final y you must harvest and preserve your crop for future use. Is eating hea thy from your own garden worth al that effort? Yes!

If you read this guide w th an open mind and the att tude of car ng about your hea th, the hea th of others and the we be ng of our on y home—the good earth itself—t will open your eyes to the mportance of creating your hea thy backyard garden You will learn why eat ng food you nurture and harvest yourself is one of the most rewarding th ngs you can do. This gu de s a so unique n tak ng the approach of start ng from the ground up, explain ng how human health begins in the so , then prov d ng c ear examples of what to grow, how to grow it, and the nutr t ona benefits to you and your fam y, your friends and your community

I know thousands of gardeners and have nterv ewed hundreds of them over the past 20 years. I have a so met w th many medi cal doctors, soi scient sts, plant biolog sts, nutr t on sts and master gardeners. Al th s involvement and research has more than convinced me that a healthy garden wil g ve you joy and bounty.

I live the organ c l festyle, and it all starts in my backyard Even the smal est th ng you do w ll make a huge difference toward l v ng a long and healthy life and ra s ng a hea thy fami y. A garden can he p you to achieve these goals.

Americans are on a new journey, seeking natura and organic solutions to the r hea th problems. People from al backgrounds are on a persona quest to be healthy wh e mak ng the r ght environmental dec s ons in the process.

I hope this gu de wi insp re you and benefit you in the same way.

A report on a patented sc entific advancement in the v ability of m'crobes in packaged soils
By M. o Shammas · Founder and Formu ator of Dr Earth® products

In 1991, I nvented the concept of infusing ferti zers and so s with beneficial so m crobes and mycorrnizae, uti zing "Nature's Intel gence©" My Dr Earth® products w'th ProBiotic® revolution zed the lawn and garden 'ndustry and changed expectations of customers. Now other compan es, with the best of intentions, se l products bel eved to 'nclude liv ng organ'sms

However, my continu'ng scientific research has revea ed serious discrepancies between laboratory cond'tions and cond'tions typ'ca ly found 'n nursery or garden center environments, cond tions that can render ineffect've, the m'crobe-infused products of a well-meaning soil bagger

After years of research d scovered a solution to the prob em Now my patented nvent on, Pro-Moisture Hydrate®, s included 'n every Dr Earth® branded so'l But in the case of all other brands who have cop'ed the use of benefic'al organisms, the effectiveness of the'r products remains at serious risk, if it exists at a,l, as I w'l presently explain.

THE MYTH - *that what works in the lab works in the real world*

Beneficial microbes are cultured n a clean laboratory env ronment with a stab e and moderate temperature for use 'n such products as yogurt, nutritional supp ements, animal feed, beer, or packaged soil

So l producers add these costly microbes to their products with the be 'ef that they are sel 'ng "living" soil. In fact, it may be "dead"

I was the first to nc ude l ving organ'sms 'n DRY organic fertil'zers, and there was no problem w th viab' ity But soon everyone wanted th's b o ogy 'n BOTH dry fert'lizers and WET bagged so' s After packag ng, these WET so'ls are sh'pped from the manufacturer into the real world and are no longer in a control ed situation favorable to living microbes.

THE REALITY - *an explanation of microbiology in relation to environment*

When soil baggers sh p the r products to retail markets, the biology contained 'n the packages faces the harsh condit'ons of the rea world extreme heat and cold In 2004, one of my customers questioned how microbes cou d surv ve in the bags in h's hot parking lot I repl ed that they cou d because they were n a dormant state. The original Dr Earth® m'crobe-infused products, the first ever ava ab e, were dry fert lizers in which microbes surv'ved regardless of temperature extremes Ongoing random tests proved the'r sustained v abil'ty However, no one in the 'ndustry rea 'zed at the t me, that adding them to WET soi s created completely different, and fatal, circumstances for these tiny life forms

I cons dered the customer's question carefu y and grew concerned I could not, w th a clear conscience, sel products c a ming to contain l ve organ sms f wasn't sure of the truth of that claim I purchased my own so from a Los Ange es nursery, where t sat in ful sun, and had it tested Two weeks later I received the bad news; all the microbes were dead.

I tested other brands that had begun add ng m crobes and mycorrh zae, stored under the same cond tions, and saw the same resu ts. The organ sms were dying w th n 30 to 60 days after packaging The temperature of bagged so ls stored outside on pal lets, in direct sun, can reach 175°F, kil ng benefic a m crobes just as cooking our food k s those that could harm us Converse y, exposure to freez ng kil s them too Microbes nfused into WET so s break dormancy and come to fe. They are fu of water, act ve y mu tip y ng and d gest ng organic mater als. When frozen, these organisms swe since water expands when it freezes caus ng their ce l wal s to crack open They rupture, and D E. Other so producers, who embraced th s profitable response to consumer demand for microbe-infused soils, sti live with the problems my research revealed

They continue to se products of questionable value wh e I have perfected my invention

THE SOLUTION *using "nature's intelligence," requires "keeping the intelligence alive"*

For years, the answer to the prob em had been r ght n my own home and part of my everyday l fe· ALOE VERA Th s desert p ant, used by early civi zations, thrives where temperatures reach as h gh as 140°F dur ng the day and be ow freezing at n ght. A oe vera works ike a natural "anti-freeze" It draws water from the surround ng env ronment and reduces "evapo-respiration" Just as it protects plants, a oe vera keeps m crobes moist and al ve n extreme heat or co d, and e ast c enough to surv ve the expans on that occurs with freez ng, so they can swell w thout burst ng and dy ng What aloe vera does for your human sk n and ha r, it a so does for liv ng m cro-organisms when ncorporated nto our wet packaged so s t coats and protects them, remains n contact, and by lowering the surface tens on of water, aloe vera serves to transport synerg st c e ements, such as mo sturizing ac ds, through the ce wal s to penetrate deep y Th s is why I formu ated, and patented (Ser a No. 12 803,002) Dr Earth Pro-Mo sture Hydrate® with a oe vera

I needed permission from the Department of Agricu ture to nc ude Pro Moisture Hydrate® with a oe vera n my so ls, but the USDA d d not recogn ze aloe vera as a so ngred ent carried out extens ve research between Apri 2005 and September 2008 and prepared a field trial and efficacy report Results n our test gardens, comparing p ants grown n our soi s with and w thout Pro Mo sture Hydrate®, proved conclusively that Pro-Moisture Hydrate® increases plant yie.ds, vigor, and color penetrat on.

W.th a patent and the Department of Agricu ture approv- al, Dr. Earth® was prepared to offer the only packaged soi in America that protects beneficia microbes.

The integrity of our company - a ong w th our p oneer ng research - allows us to make the PROMISE of Pro-Moisture Hydrate®: LIVING SOIL. We were the first to infuse benefi- cia m crobes and mycorrh zae into fert zers and pack aged soi s, offer ng customers "Nature's Intel gence® Now, w th our patented Pro-Mo sture Hydrate® we are the first AND ONLY soil producer with the ab ity to ensure that we are "Keep ng the inte igence a ive©!"

PRO-MOISTURE HYDRATE® IS FOUND ONLY IN DR. EARTH® SOILS.

Note· The aloe vera p ant, a succu ent, has fleshy eaves w th a tough outer sk n, under wh ch is a resinous, extreme y bitter tast ng, yellow substance.

A though when dried, this "aloe drug extract" has benefic a propert es, including being ant -bacter al, it s NOT in Pro-Mo sture Hydrate® because that anti-bacterial property would harm the beneficial m crobes and defeat our purpose. We use only the "inner fi et."

DR. EARTH PREMIUM SOIL BLENDS

Acid Lovers® PLANTING MIX

Purpose: To provide the perfect growing medium for all plants requiring acid soil.

DESCRIPTION: Acid Lovers® Planting Mix creates the perfect soil conditions to promote blooming and vigorous health for all acid loving plants. Use Acid Lovers® Planting Mix as a soil amendment throughout the garden when planting trees, shrubs, bare root plants, flowers and every acid loving plant in the garden.

IDEAL FOR: Hydrangeas, Evergreens, Blueberries, Hollies, Gardenias, Ferns, Tropical & Shade Plants, Camellias, Rhododendrons, Azaleas, Maples & every acid loving plant in your garden.

Home Grown® VEGETABLE MIX

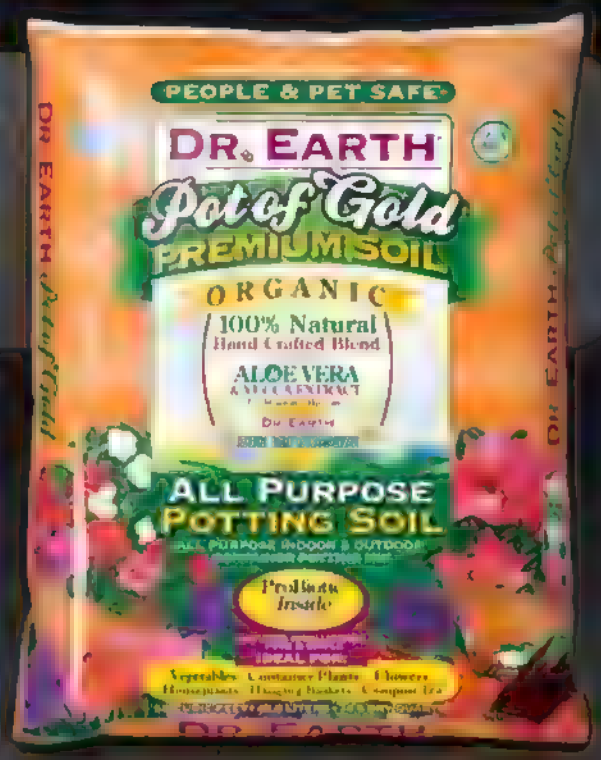
Purpose: To promote large, healthy vegetables in raised beds, containers, or in existing soil, as an amendment.

DESCRIPTION: Home Grown® Vegetable Garden Planting Mix creates the perfect soil conditions to promote plant health and abundant vegetables and herbs. Home Grown® can be used for many projects in the garden: amendment for planting trees, shrubs, bare root planting & flowers.

IDEAL FOR: Organic Vegetable Gardens. Rich in Green-fed Earthworm Castings, Cold Water Kelp Meal, Wild-Caught Fish Bone Meal, Soybean Meal and a plethora of rich organic nutrients.

Pot of Gold® POTTING SOIL

Purpose: To provide a premium potting soil for a wide spectrum of plants in containers



DESCRIPTION: Pot of Gold® All Purpose Potting Soil is recommended for use in all outdoor and indoor potting and container applications. Pot of Gold® is great for many projects in the garden in addition to container planting.

INGREDIENTS: Formulated from a fine selection of composted organic materials. Our blend is packed full of the organic materials that help plants become established. We only use: Forest Humus, Fir Bark, Peat Moss, Pumice, Earthworm Casting, Kelp Meal, Alfalfa Meal, Soybean Meal, Concentrated Seaweed Extract, Aloe Vera, Yucca Extract, Oyster Shell & Dolomite Limes. We have also included ProBiotic® beneficial soil Microbes plus both Ecto and Endo Mycorrhizae.

IDEAL FOR: Herbs, Vegetables, Indoor Gardens, Container Plants, Flowers, Houseplants, Hanging Baskets and Patio Containers. All container Plants.

Natural Wonder® FRUIT TREE SOIL

Purpose: Use combined with native soil at planting time to nurture & establish fruit trees.

DESCRIPTION: Natural Wonder® Fruit Tree Planting Mix creates the perfect soil conditions to promote plant health and abundant fruit production. Natural Wonder® is great for many projects in the garden. It can also be used as an amendment for planting ornamental trees, shrubs & bare root planting.

IDEAL FOR: All fruit trees, (including peaches, citrus, apples) grapes, all nut trees, all berries, avocados and all vines. Rich in Green-fed Earthworm Castings, Cold Water Kelp Meal, Valley Grown Alfalfa Meal, Wild-Caught Fish Bone Meal and a plethora of organic nutrients.

USING ADVANCED ORGANICS®...

Mother Land® MULTI-MIX

Purpose: To use as an all-purpose planting mix for vegetables, flowers, trees, shrubs, and more

DESCRIPTION: Formulated from a fine selection of composted organic materials. Our blend is packed full of the organic materials that help your plants become established. We only use Forest Humus, Fir Bark, Peat Moss, Worm Castings, Alfalfa Meal, Kelp Meal, Soybean Meal, Fish Meal, Fish Bone Meal, Concentrated Seaweed Extract, Aloe Vera, Yucca Extract and Oyster Shell & Dolomite Limes. We have also included ProBiotic® beneficial soil Microbes plus both Ecto and Endo Mycorrhizae. Mother Land® is great for many projects in the garden: perfect mix for large outdoor containers, use as an amendment for planting trees, shrubs, bare root planting, flowers & vegetables.

IDEAL FOR: Flowers, Trees, Shrubs, Vegetables, Ground Cover, Seed Cover and a soothing mulch rich in aloe vera.

Total Advantage® PLANTING MIX

Purpose: To provide the ideal growing medium for all roses and flowers

DESCRIPTION: Total Advantage® Rose and Flower Planting Mix promotes blooms in all flowering plants: roses, trees, shrubs, annuals. Total Advantage® is great for many projects in the garden. It can be used as an amendment for planting trees, shrubs, bare root planting, flowers & vegetables.

IDEAL FOR: English Teas, All Flowers, Hybrid Teas, Mini Roses, Climbers, Annuals & Perennials.

...TO STAY AHEAD OF THE CURVE

House Plant PREMIUM SOIL

Purpose: Growing medium for all house plants, patio containers and hanging baskets

DESCRIPTION: Formulated from a fine selection of composted organic materials. Our blend is packed full of the organic materials that help plants become established. We only use: Forest Humus, Fir Bark, Peat Moss, Pumice, Earthworm Casting, Kelp Meal, Alfalfa Meal, Soybean Meal, Concentrated Seaweed Extract, Aloe Vera, Yucca Extract, Oyster Shell & Dolomite Limes. We have also included ProBiotic® beneficial soil Microbes plus both Ecto and Endo Mycorrhizae.

IDEAL FOR: All indoor house plants, pothos, philodendron, palms, ferns, herbs and vegetables. Excellent for use in all container sizes including Patio Containers and Hanging Baskets.

Root Zone® STARTER MIX

Purpose: To help seeds sprout, increase success of transplants, establish plants quickly

DESCRIPTION: Root Zone® ProBiotic® Seed Starter Mix promotes germination of seeds; helps plants become established as quickly as possible.

IDEAL FOR: Sprouting Seeds and Transplanting Cuttings for a quick and healthy start.

Seed Starting: Excellent for use in seed start flats and containers.
Establishing Cuttings: Root Zone® enhances rooting.
Compost Tea: Use as soil drench or foliar spray.

Home Grown® POTTING SOIL

Purpose: To meet the exacting requirements of organic growers of medicinal plants

DESCRIPTION: Home Grown® potting Soil creates the perfect soil conditions to promote plant health, abundant plant growth, maximum yields, maximum weight gain and double the size potential! Size and quality matter! When looking to maximize crop and yield production – no other soil in America will deliver as promised.

RICH IN: Forest Humus, Fir Bark, Peat Moss, Pumice, Bat Guano, Earthworm Casting, Kelp Meal, Alfalfa Meal, Soybean Meal, Concentrated Seaweed Extract, Aloe Vera, Yucca Extract, Oyster Shell & Dolomite Limes. We have also included ProBiotic® beneficial soil Microbes plus both Ecto and Endo Mycorrhizae. This is our most advanced and potent soil designed to outperform any soil on earth.

IDEAL FOR: Indoor & Outdoor Organic Medicine & Herb Gardens for maximum production.

Natural Choice® COMPOST

Purpose: Mulch, seed cover, amendment at planting time, break up clay & improve texture

DESCRIPTION: Natural Choice® All Purpose Compost creates the perfect soil conditions to promote plant health and optimum growth. Natural Choice® All Purpose Compost can be used for many projects in the garden: amendment for planting trees, shrubs, bare root planting, flowers, vegetables & over seeding lawns.

IDEAL FOR: Garden Mulch, Planting Amendment, Seed Cover, Helps Break Up Clay Soil & Improves Soil Texture

BagTainer®

Grow in the bag!®

DESCRIPTION: Here you have "Home Grown®"—the soil customized for popular production crops—already in the perfect container. Complete growing instructions come right on the bag! Basically, you just cut the top off, punch holes in the bottom and get growing!

- is sized at 13 quarts
- has a highly reflective finish, to keep the roots from getting too hot
- includes desirable ingredients such as BAT GUANO and WORM CASTINGS

Bagtainer® "Grow in a Bag" Home Grown Potting Soil creates the perfect soil conditions to promote plant health, abundant plant growth, maximum yields, maximum weight gain and double the size potential! Size and quality matter! When looking to maximize crop and yield production – no other soil in America will deliver as promised.

IDEAL FOR: Indoor & Outdoor Organic Production Gardens for maximum plant health and growth.

ProMoisture Hydrate®

Keeping The Intelligence Alive

The Essence of Healthy Plants

Fertile Soil

If the soil is healthy, common sense tells us, so is the plant that grows in it. If you take multivitamins, exercise and sleep well, you are most likely to be healthy. Soil is similar to people. Fertilizers are the vitamins, wind and rain are the exercise, and sun and shade are the rest. Organic fertilizers take a strategic approach aimed at feeding the microorganisms in the soil rather than the plants directly, which is how synthetic fertilizers work. You might ask, "What's the difference if my plants grow?" By fertilizing or feeding the soil you enable it to build nutrient reserves that plant roots can tap into any time as needed. Feeding builds good soil structure, creates pores for roots to extend their reach, helps suppress disease and supports biological diversity. Feeding also helps maintain a neutral pH to support humus formation that adds minerals and micronutrients to a living soil.

COMPOST AND MANURE

A well made compost functions similarly to a well made organic fertilizer, except it is not nearly as potent in nutrients. Compost is simply the remains of once living organisms that have been degraded by microorganisms. Compost usually consists of organic materials such as yard wastes, plant trimmings, leaves, grass trimmings, soil with microbes and various wet kitchen scraps other than meat. Applying this composted substance to your soil will help provide great tilth, microorganisms, nutrients and nutrient stores.

Part of the beauty of compost is the nutrients from the organic matter in it are released slowly. Compost is so nutrient rich it often meets the needs of a plant for one year or more, although you do not receive the maximum growth and health potential if you apply compost only once a year. Plants grown with healthy and diverse compost will absorb a slower, steadier and more diverse set of nutrients than if they receive synthetic nutrients. Natural compost leads to healthier, disease resistant plants packed full of nutrients. Caution: Avoid compost made from bio solids or sewage sludge. Many organic experts warn against them, because they are linked to heavy metals and human pathogens.

Adding compost to your soil is an excellent way to build it up, especially if the soil was nutrient deprived in the past. Where I grew up in Los Angeles, asphalt lots and industrial yards were redeveloped for residential lots as land values increased. The soil under these new homes had been deprived of organic matter and nutrients for many years. If you live in a similar area, amending the soil with compost is one effective way to prepare your area to support healthy growth. Applying a premium home made or store bought compost benefits a soil in any stage of maturity and helps to establish any edible garden. To get safe, effective compost for your garden, look for a trusted nursery or professional grower who can advise you on how to boost your soil's fertility.

Manure, or animal waste, is another effective but risky way to spread nutrients into your soil. Fresh manure has a substantial effect on soil fertility for agriculture. However, I do not recommend using it in a home garden. Raw manure may release ammonia, which is detrimental to plant health. For this and other reasons, manure needs to be composted for a long time before you use it in your garden. Once composted, though, manure is a nutrient-rich material to mix with your soil. Never use the waste of a carnivore (meat eater) such as a cat or dog, as it can carry harmful pathogens. If you raise rabbits, sheep, chickens, horses or cows, these manures are great. Just remember to compost them before you apply them to the garden.

ORGANIC FERTILIZERS AND SOIL AMENDMENTS

These materials consist of natural ingredients that the beneficial microbes in a living soil digest as food. Popular ingredients include fish meals, feather meal, alfalfa meal, cottonseed meal, bone meals, kelp meal, seaweed extracts, blood meal and liquid animal manures. The meals and extracts contain organic matter and nutrients, while the bacteria and the symbiotic mycorrhizal fungi convert the nutrient sources into usable forms plants can absorb as needed. Also, fungi extend the reach of plant roots to acquire more nutrients.

Organic fertilizers have a much lower chance of leaching through the soil and contaminating the water table. With organic fertilizers, nutrients are physically bound into larger pieces of organic matter lodged in the soil and available so that microbes can free them up for plant use. There is nothing mysterious or magical about organic fertilizers. They simply give you a way of working with nature rather than against it. The objective in using them is to recycle organic matter back into the soil rather than discarding it and relying on chemicals. In fact, the organic process is much less mysterious than the methods of the chemical grower.

A program of organic fertilizers involves far more than just growing plants without chemical fertilizers and artificial sprays. Using organics is a life choice and commitment that recognizes the complex, successful workings of nature in maintaining life for hundreds of millions of years. Sound organic cultivating principles closely follow processes found in the natural world. Also, do not think that using these principles leads to lower yields or quality. In fact, with organics you are likely to increase both. Organic methods also support habitat for wildlife while insuring the fruits and vegetables you produce in your garden are safe, nutritious and free of chemicals. You also reduce the possibility of the harmful effects of chemicals on infants and children.

The soil teems with millions of microorganisms that release nutrients required for healthy plant growth from organic matter. Rather than feeding plants directly, organic fertilizers feed the soil with natural materials that allow your plants to draw on a humus reservoir of nutrients as they need. Plants grown this way are stronger and more resistant to pests and disease. Organic fertilizers work and persist for many months (unlike the short term affects of chemical fertilizers) because they become a part of the living soil.

You can find a number of different organic fertilizers and amendments at your local nursery. Some are formulated to support the nutritional needs of particular plant categories such as vegetables, while others take an all-purpose approach good for a variety of plants. Fertilizers are generally tested and proven for a specific application. I recommend choosing a selection specific to your types of plants: vegetable fertilizer for vegetables, fruit fertilizer for your fruit trees. In any case, organic fertilizers and amendments are geared for the slow, controlled release of plant food. They are perfect for preparing the soil for upcoming seasons without having to worry about nutrients being wasted or washed away.

CHEMICAL FERTILIZERS

Chemical fertilizers feed plants directly and do not address the soil, because they are in a form that plants can absorb immediately. While direct plant feeding sounds attractive, it adds no beneficial attributes to the soil. In fact, over time chemical fertilizers can deplete the soil of nutrients. The gardener treating plants only with chemicals uses the soil simply as an anchor to hold plants in place. While this approach appears to have good short term results, in the long run it has disastrous consequences. When organic matter is not replaced in the soil, beneficial organisms die out, the soil structure breaks down, and the soil becomes hard, airless and unproductive. Attempts at "force-feeding" plants result in soft, sappy growth, which is prone to attack by a host of pests and diseases.

When plants are forced to grow with chemical fertilizers, they become weak. As plant cell walls develop, they do not have enough time to produce two important compounds, cellulose and lignins. These substances strengthen protective cell walls. As cells are forced to duplicate and grow quickly, the amount of cellulose and lignin decreases, making the plant tissues much softer and more attractive for pests to attack. If you were an insect, would you rather bite into a soft head of butter lettuce or chew on a piece of wood? Insects prefer tender, soft growth.

Chemical pesticides are also often used for short-term pest control. Unfortunately, these pesticides also kill the natural predators of the pests that attack plants. Eventually, the problem gets worse as nothing is left to kill the "bad bugs." Stronger, more toxic pesticides then have to be used, setting in motion a hard-to-break, vicious cycle: Plants and soil weakened by chemicals need more chemicals to protect them from pests they resist naturally when well nourished.

Problems with Chemical Fertilizers

Chemical fertilizers feed plants with nutrients directly. This inhibits, and in some cases, kills off microbes within the soil. In addition to wiping out organisms, nutrients added as soluble fertilizers can be lost inefficiently through leaching away or conversion to an unusable form such as nitrogen gas. Chemicals washed away during rain or irrigation can pollute ground water, streams, lakes and oceans. In addition, commercially synthesized chemical fertilizers do not have the beneficial soil microbes that feed the plants certain bio-chemicals such as vitamins and antibiotics.

When soil becomes unbalanced through chemical alteration, certain micronutrients and heavy metals, such as iron, magnesium and aluminum, become more soluble in the soil and can be toxic to plant tissues. Unbalanced soils also reduce the productivity of bacteria (nitrogen fixers) making nutrients less available. Chemical fertilizers also decrease a soil's ability to hold onto positively charged nutrients, which allows water to more easily wash away nutrients. An imbalance of salts locks up other micronutrients and makes them unavailable to plants while concentrating harmful molecules in the soil. All this can lead to further deterioration of the soil by chemically deteriorating humus and organic matter reserves.

Adding petrochemical synthetic fertilizers drives up the salt concentration in the soil and changes the pH, which can adversely affect plants. More importantly, chemical fertilizers only feed for a short time. Organic fertilizers feed continuously, because the microbes do not digest all of the organic fertilizer immediately. Chemical fertilizers reduce the soil aggregation properties of microbes and sacrifice good tilth. Conversely, organic fertilizers support water retention, reduce runoff and support long term soil health.

Neglecting living organisms in the soil by treating plants with chemically synthesized fertilizers and pest sprays may eventually lead to the extinction of all living matter in commercial soil. In the future, we may become completely dependent on synthetics to get any yield at all. Many gardeners and consumers regard this cycle as unsustainable over time. They have devoted their lives, farming practices and backyards to restoring and preserving biological diversity in soil.

The Living Soil

In a country like the United States, which has been cultivated for hundreds of years, the soil is made up of not only the underlying geological strata, but also of the products of years of farming. As a result, the soils are many and varied. Clays, sands, and loams all give color and texture to the patchwork of fields once typical of the countryside.

Deep, dark, rich soils are particularly good at supporting crops such as vegetables and grasses. The dead organic remains from previous crops retain moisture, feed biological life and ensure good soil structure. Other edible crops prefer lighter, more free-draining soils with rather higher levels of mineral nutrients. The good news is that you can always improve the structure of your soil by amending it with the appropriate materials to achieve the desired structure for the plants you are growing.

In our gardens, soils are even more varied than those under the plow. Most of them are able to support a colorful range of handsome plants. Even those from the most remote or exotic parts of the world seem to find an agreeable climate somewhere in our gardens. However, in order to grow a wide range of healthy plants, you need to know what your soil is composed of, and if necessary, how to improve it.

The Answer: Feed the Soil Not the Plants

Feed the soil, not the plants! When we feed our plants and not our soil, we lose all the benefits from microbes. When we feed the soil, we actually feed the microbes in the soil. Microbes make nutrients available for plants. You feed microbes by adding organic material. If you give plants a synthetic chemical fertilizer, you feed only the plant, not the soil nor the microbes. Soil has supported plants and given them nutrients since long before we invented other fertilizers, so why not feed the soil and preserve the natural biological interactions that support plant survival and growth?

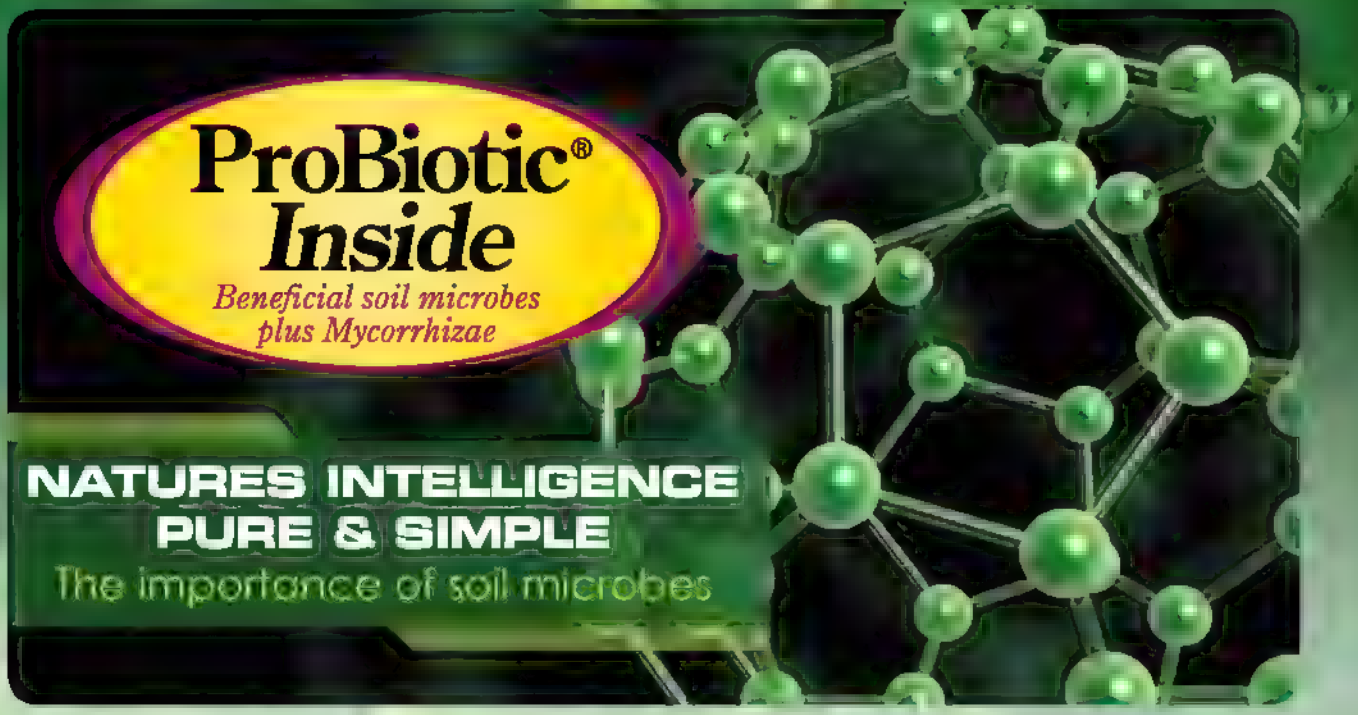
Remember: healthy soils equal healthy plants that equal healthy animals and humans. It is that simple.

Why are people generally indifferent to the tiny life all around us? Perhaps we modern people ignore microorganisms, because we have a strong bias against all microscopic life. Now that we understand the germ theory of disease, and appreciate the many health improvements that came from it, we have become "biophobic." Are we prejudiced against anything alive but so small we cannot see it? Do we think anything microscopic and alive must be bad for our health? Do we take for granted what we cannot see? This is a dangerous bit of blindness.

True, some bacteria and viruses threaten our health. But the vast majority of tiny life is either neutral or helpful. Much of it is even essential. Our lives would be impossible without the essential bacteria and fungi in our guts and in our soil. Without microorganisms we could not have penicillin or yogurt (to name just two).

The large-scale, corporate food industry sees organic gardening as a major enemy and touts the benefits of genetically enhanced crops instead of first enhancing the soil organically to make crops more healthy and nutritious. Think about it. If everybody grew their own food and were healthy, we would not need giant monoculture and commercial farming. Pharmaceutical companies would generate much less revenue. You would need a medical doctor only if you had a broken bone. It all comes down to corporate manipulation, control and money.

Buy heirloom seeds and transplants. Grow everything you can. What you cannot grow, buy from someone you trust. If you're an attorney, CPA, architect, nurse or have a 9 to 5 job in the middle of the city with no time or space to garden, barter your services with an organic produce farmer, chicken farmer, cattle rancher or neighbor who grows the healthiest organic tomatoes. A few words from you could be worth a fresh basket of healthy fruit or vegetables. I do this all the time. I have not bought a tomato from the market in more than 15 years. As my father-in-law says, "Every little bit helps." Please consider these ideas to ensure your health and the health of your loved ones.



The soil is alive. Below our feet and invisible to the naked eye, tiny microbes – the great digesters of the earth – constantly break down organic material into a more usable forms that plant roots can identify, absorb, and ultimately incorporate for new growth. This material includes complex organic compounds, such as tannins, lignins, proteins, carbohydrate, cellulose, pectin, etc.

Healthy soil should contain no less than 10,000,000 bacteria per gram. The presence of microbes ensures that nutrients are made available to plants at a steady rate. While the plants are actively growing – and requiring more nutrients – so do the microbes in the soil. As the weather warms, both the plant and microbes respond at a similar rate. The microbes become increasingly active in their role of breaking down organic material into forms more readily absorbed by the growing plants that need extra nutrition. As the weather cools – and plants require less nutrition – so do the microbes. The reduction in their activity means fewer nutrients in the soil are being released to the plants. In this way, the soil can rebuild food reserves. This self-regulating cycle has occurred for millions of years as part of the wisdom of nature.

Microbes also help to stabilize the soil by physically binding soil particles together; they release a by-product called glomalin that acts as a "glue" binding mineral particles and organisms to each other. This contributes greatly to soil aggregation. All of these processes happen naturally in a healthy, productive soil.

FEED THE SOIL

When we feed our plants instead of our soil, we lose all the benefits that microbes contribute. When we say "feed the soil," it means feed the microbes in the soil, because it's the microbes that make nutrients available for the plants. The way you feed microbes is through the addition of organic material. If you feed with a synthetic chemical fertilizer, you are feeding the plant, not the soil, or the microbes. Adding petrochemical synthetic fertilizer also drives up the salt index in the soil and changes the pH, which can have adverse effects on plants.

More importantly, chemical fertilizers only feed for a short period of time; organic fertilizers offer continual feeding because the microbes cannot digest all of the organic fertilizer at once. With chemical fertilizers, we also lose the microbes' contribution to soil aggregation. Good soil aggregation leads to improvements in tilth, water retention, the rates at which water penetrates the soil, the amount of oxygen in the soil, and the reduction of runoff. All of these desirable soil conditions can be achieved by adding organic material. As you can see, microbes are immeasurably important and essential to the health of all productive soils.

To elevate the microbial colonies in your garden, use Dr Earth® organic fertilizers and soils. They contain ProBiotic® a broad-spectrum soil and seed inoculant, already mixed into the products. Two things will happen when you use Dr. Earth®:

- The organic fertilizer and soil will become the food source for the microbes, providing almost immediate nutrition for your plants, which means fast results.
- Your soil will contain the proper number of microbes to truly benefit your plants because – unlike most organic fertilizers and soils – Dr. Earth® products have various species of beneficial microbes already included as components.

Increased biological activity in the soil and the buildup of existing bacterial populations, will help make your plants and garden resistant to diseases, frost, and insects, while maximizing the potential for growth and health. Remember your soil is alive **DO NOT TREAT IT LIKE DIRT!** Learn to work with, and nurture, the natural bio-system of your soil.

DR. EARTH FERTILIZER BLENDS

BULB FOOD FERTILIZER

DESCRIPTION: Bulb Food produces remarkable results because nutrients are released quickly, yet continue to feed for several months. Ultra-premium scientific formula provides optimum levels of primary essential plant nutrients, including micronutrients and multi-minerals. The result is bigger, more abundant blooms, naturally. Loosens and improves soil structure so bulbs can reach maturity more quickly.

IDEAL FOR: Growing all bulbs, tubers and rhizomes.

STARTER FERTILIZER

DESCRIPTION: Starter fertilizer produces remarkable results because nutrients are released quickly yet continue to feed for several months. Ultra-premium scientific formula provides optimum levels of primary essential plant nutrients, including micronutrients and multi-minerals. Probiotic® ensures organic nutrients are thoroughly broken down and then released in the soil for plant roots to absorb them as they are needed. Feeds for several months. Great for every plant in the garden.

IDEAL FOR: Providing balanced and fast nutrition for transplants. Feeds all vegetables, trees, shrubs, all plants in early vegetative stages of growth, drought tolerant plants (e.g. cactus and succulents) and all plants that require a low N-P-K.

ROSE & FLOWER FERTILIZER

DESCRIPTION: Rose and Flower fertilizer produces remarkable results because nutrients are released quickly, yet continue to feed for several months. Ultra-premium scientific formula provides optimum levels of primary essential plant nutrients, including micronutrients and multi-minerals. ProBiotic® ensures that organic nutrients are thoroughly broken down and then released in the soil for plant roots to absorb them as they are needed.

IDEAL FOR: All flowering plants—English teas, hybrid teas, climbing roses, miniature roses, perennials, annuals.

RHODODENDRON, AZALEA & CAMELLIA FERTILIZER

DESCRIPTION: Infused with ProBiotic®—consisting of "Seven Champion Strains" of beneficial soil microbes and eight select strains of ecto & endo mycorrhizae—which contributes to drought tolerance, enhanced nutrient availability and increased plant performance. The Dr. Earth® probiotics are a most complete "broad-spectrum" bio-active package designed to work synergistically with the raw organic nutrients that make up the acid lovers formula. This spectacular blend builds soil health, promotes superior bushes and flowers with larger and more abundant colorful blooms.

RICH IN: Nutrient-rich Cottonseed Meal, Wild-caught Alaskan Fish Bone Meal, Valley Grown Alfalfa Meal, High Country Feather Meal, Cold Water Kelp Meal, Mined Potassium Sulfate, Concentrated Micronutrient-rich Seaweed Extract (synergistically boosted with micronized humic acids for maximum bioavailability.)

IDEAL FOR: All acid lovers, maples, camellias, azaleas, hollies, gardenias, hydrangeas, evergreens, ferns, shade plants, tropical plants and all berries.

TOMATO, VEGETABLE & HERB FERTILIZER

DESCRIPTION: Ultra-premium scientific formula provides optimum levels of primary essential plant nutrients, including micronutrients and multi-minerals. This spectacular blend builds soil health, promotes a superior harvest, with larger and more abundant, nutritious and tasty crops.

RICH IN: Wild-caught Alaskan Fish Bone Meal, High Country Feather Meal, Cold Water Kelp Meal, Valley Grown Alfalfa Meal, Mined and Micronutrient-dense Colloidal Soft Rock Phosphate, Wild-caught Alaskan Fish Meal, Naturally Mined Potassium Sulfate, Micronutrient-rich Seaweed Extract (synergistically boosted with micronized humic acids for maximum bioavailability.)

IDEAL FOR: Organic vegetable gardens. Excellent for use in raised beds during transplanting, sowing seeds, or even mid-season for a nutritional boost to maximize your harvest.

FLOWER GARDEN FERTILIZER

RICH IN: Wild-caught Alaskan Fish Bone Meal, High Country Feather Meal, Valley Grown Alfalfa Meal, Naturally Mined Potassium Sulfate, Mined and Micronutrient-dense Colloidal Soft Rock Phosphate, Micronutrient-rich Seaweed Extract (synergistically boosted with micronized humic acids for maximum bioavailability.)

IDEAL FOR: Annuals, bedding plants, impatients, begonias, petunias, marigolds, daylilies, geraniums, lavender and every flower in the garden.

Raised Beds: Excellent for use in raised beds during transplanting or feeding mid-season for a nutritional boost to maximize flower health and production.
Planting: Apply a generous helping as directed to existing gardens or at time of planting or transplanting. Apply any time mid-season to supply a continual nutritional supply to maximize your healthy and beautiful flower garden.
Containers: Feed container plants every 6 weeks to keep plants stay healthy, strong and fully producing.

ALL PURPOSE FERTILIZER

DESCRIPTION: All Purpose fertilizer produces remarkable results because nutrients are released quickly, yet continue to feed for several months. Ultra-premium scientific formula provides optimum levels of primary essential plant nutrients, including micronutrients and multi-minerals. ProBiotic® ensures organic nutrients are thoroughly broken down and then released in the soil for plant roots to absorb them as they are needed. Feeds for several months. Great for every plant in the garden.

IDEAL FOR: Providing balanced and fast nutrition for all vegetables, flowers, bedding plants, potted plants, all trees, shrubs, annuals, and perennials.

BUD & BLOOM BOOSTER

DESCRIPTION: Ultra-premium scientific formula provides optimum levels of primary essential plant nutrients, including micronutrients and multi-minerals. ProBiotic® ensures organic nutrients are thoroughly broken down and then released in the soil for plant roots to absorb them as they are needed. Infused with ProBiotic®—consisting of "Seven Champion Strains" of beneficial soil microbes and eight select strains of ecto and endo mycorrhizae—which contributes to drought tolerance, enhanced nutrient availability, and increased plant performance. The Dr. Earth® probiotics are a most complete "broad-spectrum" bio-active package designed to work synergistically with the raw organic nutrients that make up the bud & bloom formula. This spectacular blend builds soil health, promotes superior buds and blooms with larger and more abundant plant production.

IDEAL FOR: All flowering plants, budding plants, roses, vegetables, fruit trees, vines, bougainvilleas, citrus, tropical's and every flowering plant in your garden.

FRUIT TREE FERTILIZER

DESCRIPTION: Fruit Tree fertilizer produces remarkable results because nutrients are released quickly, yet continue to feed for several months. Ultra-premium scientific formula provides optimum levels of primary essential plant nutrients, including micronutrients and multi-minerals. ProBiotic® ensures organic nutrients are thoroughly broken down and then released in the soil for plant roots to absorb them as they are needed. The Dr.Earth® probiotics are a most complete "broad-spectrum" bio-active package designed to work synergistically with the raw organic nutrients that make up the fruit tree formula. This spectacular blend builds soil health, promotes a superior harvest with larger and more abundant, nutritious and tasty fruits.

IDEAL FOR: All fruit trees, citrus, avocado, vines & berries.

PALM, TROPICAL & HIBISCUS FERTILIZER

DESCRIPTION: Palm, Tropical & Hibiscus fertilizer produces remarkable results because nutrients are released quickly yet continue to feed for several months. Ultra-premium scientific formula provides optimum levels of primary essential plant nutrients, including micronutrients and multi-minerals. ProBiotic® ensures organic nutrients are thoroughly broken down and then released in the soil for plant roots to absorb them as they are needed. Infused with ProBiotic®—consisting of "Seven Champion Strains" of beneficial soil microbes and eight select strains of ecto and endo mycorrhizae—which contributes to drought tolerance, enhanced nutrient availability, and increased plant performance. The Dr. Earth® probiotics are a most complete "broad-spectrum" bio-active package designed to work synergistically with the raw organic nutrients that make up our tropical formula. Rich in magnesium a needed palm nutrient.

IDEAL FOR: All tropical and sub-tropical plants, palms, hibiscus, plumerias, ferns, bougainvilleas and every flowering plant.

SINGLE INGREDIENT FERTILIZERS

BLOOD MEAL

BENEFITS:

- An excellent source of organic nitrogen
- Contains Dr. Earth ProBiotic® soil and seed inoculant
- Promotes growth of all types of plants
- Can be used as a fertilizer tea to feed plants
- Helps to repel deer

DESCRIPTION:

Kiln-dried blood meal infused with seven strains of Probiotic® beneficial soil microbes

USES:

Vegetables
Roses and flowers
Trees and shrubs
Containers plants
Tropical plants
All plants in vegetative growth

BONE MEAL

BENEFITS:

- An excellent source of organic phosphorous and calcium
- Contains Dr. Earth ProBiotic® soil and seed inoculant
- Provides both long & short term benefits
- Great for root and fruit development
- Contains trace elements

DESCRIPTION:

Bone Meal Infused with seven strains of ProBiotic® beneficial soil microbes

USES:

Bulbs
Flowers
Roses
Vegetables
Trees and shrubs
All blooming plants

FISH MEAL

BENEFITS:

- Contains Dr. Earth ProBiotic® soil and seed inoculant
- Feeds for a long period of time
- Faster results due to the microbes
- Benefits all types of plants
- A traditional source of primary nutrients
- High in trace elements

DESCRIPTION:

Fish meal Infused with seven strains of ProBiotic® beneficial soil microbes

USES:

Vegetables
Flowers
Trees and shrubs
Annuals and perennials

KELP MEAL

BENEFITS:

- An excellent source of potash
- Contains Dr. Earth ProBiotic® soil and seed inoculant
- Promotes health in all planting applications
- Contains minerals, growth regulators, vitamins, hormones, and enzymes
- A potent all around ingredient that will benefit all plants

DESCRIPTION:

Cold water Norwegian kelp infused with seven strains of ProBiotic® beneficial soil microbes

USES:

Vegetable gardens (especially important for supplying trace minerals to crops that will be consumed)
Roses
Trees and shrubs
Tropical plants

ALFALFA MEAL

BENEFITS:

- Contains Dr. Earth ProBiotic® soil and seed inoculant
- Acts fast because it decomposes fast
- Excellent for roses because it contains magnesium which your roses love
- Contains triacontanol which helps boost growth of all plant types

DESCRIPTION:

Alfalfa Meal infused with seven strains of ProBiotic® beneficial soil microbes.

USES:

Roses
Vegetable gardens
Trees
Shrubs
Annuals and Perennials
Tropical plants

BAT GUANO

BENEFITS:

- An excellent source of fast acting nitrogen
- Contains Dr. Earth ProBiotic® soil and seed inoculant
- Promotes growth of all types of plants
- Can be used as a fertilizer tea for all applications

DESCRIPTION:

Bat Guano Infused with seven strains of ProBiotic® beneficial soil microbes

USES:

All indoor plants
All outdoor plants
Plants that love nitrogen
Plants in vegetative growth
Vegetables
Herbs

COTTONSEED MEAL

BENEFITS:

- Contains Dr. Earth ProBiotic® soil and seed inoculant
- Fast results due to the microbes
- All around source of primary nutrients
- Makes soil more acidic

DESCRIPTION:

Cottonseed Meal Infused with seven strains of ProBiotic® beneficial soil microbes

USES:

Acid loving plants:
Roses
Trees and shrubs

FISH BONE MEAL

BENEFITS:

- An excellent source of organic phosphorous and calcium
- Contains Dr. Earth ProBiotic® soil and seed inoculant
- Benefits plants in all stages of growth
- Especially beneficial for roots, buds, blooms
- High in trace elements

DESCRIPTION:

Pasteurized Fish Bone Meal infused with seven strains of ProBiotic® beneficial soil microbes

USES:

Roses
Bulbs
Trees and shrubs
Vegetable gardens
All fruiting plants
All flowering plants

SOFT ROCK PHOSPHATE

BENEFITS:

- Contains Dr. Earth ProBiotic® soil and seed inoculant
- An excellent source of natural phosphorus and calcium
- Great for feeding flowering trees & shrubs
- Stimulates root growth.

DESCRIPTION:

Colloidal phosphate infused with seven strains of ProBiotic® beneficial soil microbes.

USES:

Bulbs
Vegetables
Roses and flowers
Trees and shrubs
All fruiting and flowering plants

Healthy Garden

3 EASY STEPS FOR A HEALTHY HARVEST
DR. EARTH
Recipe for Success
WHEN PLANTING VEGETABLES
FOLLOW THESE THREE SIMPLE STEPS
STEP 1 Plant
STEP 2 Provide
STEP 3 Protect
MIX SOIL
One bag of soil mix will amend approximately 35-50 square feet of garden for healthy plants, maximum yield & old-fashioned flavor.
FERTILIZE
Feed your vegetables at time of planting and every 6 weeks, nourishing them so they can better nourish you, with delicious "homegrown health."
SAFEGUARD
Bring ALL of your abundant harvest to the table wholesome & appetizing state. Our super-safe spray easily controls pests and diseases.
ProBiotic Inside
NATURE'S INTELLIGENCE PURE & SIMPLE
PEOPLE & PET SAFE
DR. EARTH
Home Grown
PREMIUM SOIL
ORGANIC
100% Natural
ALOE VERA
JUST GO ORGANIC!
DR. EARTH
FINAL STOP
DISEASE CONTROL
PEOPLE & PET SAFE
DR. EARTH
ORGANIC
PREMIUM
ORGANIC 5
TOMATO, VEGETABLE & HERB FERTILIZER

9 VEGGIES

Tips On Growing 9 Common Vegetables
From Milo's Book "Healthy Garden, Healthy You"

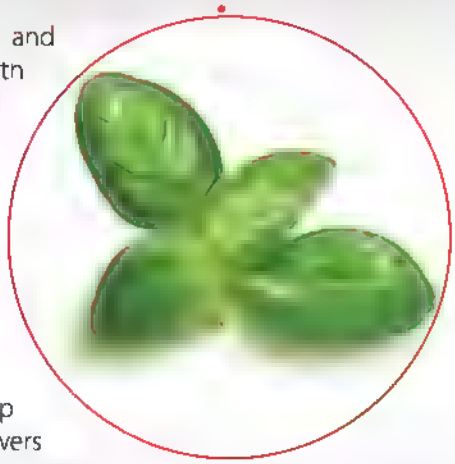
Healthy You

growing your own veggies

TIPS FROM MILO'S BOOK "HEALTHY GARDEN, HEALTHY YOU"

This article focuses on 9 popular garden vegetables. The full selection is available in Milo's book available at www.milo.pro

BASIL



+ Health Power: Basil known for flavonoids (protect DNA, which creates and regulates cells) and volatile oils (antibacterial action). Some oils even halt growth of drug-resistant bacteria. Volatile oil eugenol may reduce inflammation and pain, such as in arthritis

↑ Vitamin and Mineral Content:
Vitamins – K, A and C
Minerals – Iron, Calcium, Manganese, Magnesium and Potassium

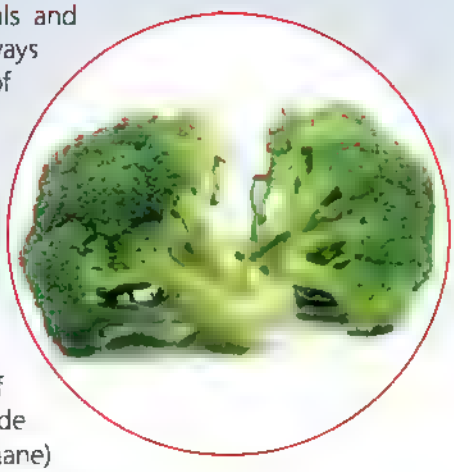
⊘ Disease Prevention: Basil contains strong antioxidant beta-carotene. Prevents unstable molecules (free radicals) from damaging epithelial cells including blood vessel walls. Beta-carotene helps prevent plaque build up (atherosclerosis) in arterial walls by blocking oxidation of LDL cholesterol. Lowers risk of heart attack and stroke. Contributes to the prevention of asthma, rheumatoid and osteoarthritis

❦ How to Grow: Grow as an annual where winter snow or frost are common; a perennial in warm, Southern regions. Two types: sweet and bush. Sweet is taller (1.5-2 feet high, more productive, better flavor). Sweet basil grows best in sunny, protected area with healthy soil. Sow seeds in early spring in smaller containers indoors. Prepare soil by working in aged compost, manure or planting mix with plenty of organic matter. Transplant outdoors about one foot apart after last frost. Keep soil moist, water thoroughly during hot, dry weather. Remove flower buds when they appear to stimulate more growth. Harvest younger leaves through summer in quantities needed for cooking. Also dry and put in airtight containers or freeze for later use.

✕ Insect Control: Minor pest problems. Prevent Japanese beetles from eating foliage by hand picking

✓ Tips: Save seeds for next year by harvesting stems after seeds ripen. Hang upside down in a closed area. Set cloth underneath to catch seeds as plant dries up and releases them

BROCCOLI



+ Health Power: Broccoli is a super food with many vitamins, minerals and phytonutrients that trigger a complex, intricate set of biochemical pathways supporting overall health. High fiber content lowers concentration of low-density lipoproteins (LDL) in the blood and elevated blood sugar, promoting cardiovascular health. Helps promote weight loss. A superior source of antioxidants. Folate helps protect the heart/circulatory system and promote healthy fetal development. Contains sulforaphane, which fights Helicobacter pylori bacteria that can cause stomach cancer. Along with isothiocyanate, it also boosts production of detoxification enzymes, which can help rid the body of potentially carcinogenic chemicals. Speeds up metabolism of estrogen, which may help suppress breast cancer. The phytonutrient indole-3-carbinol in broccoli reduces the metastasis of cancer cells and risk of breast cancer. Other beneficial phytonutrients include carotenoids, flavonoids and glucosinolates (which get converted to sulforaphane). Great source of calcium for bone building. Vitamin C, beta-carotene and the enzyme cofactors zinc and selenium help maintain strong immune system.

↑ Vitamin and Mineral Content:
Vitamins - C, K, A, B9 (Folate), B6 (Pyridoxine), B2 (Riboflavin), B5 (Pantothenic), B1 (Thiamin), B3 (Niacin) and E
Minerals – Manganese, Potassium, Phosphorus, Magnesium, Iron, Calcium & Zinc

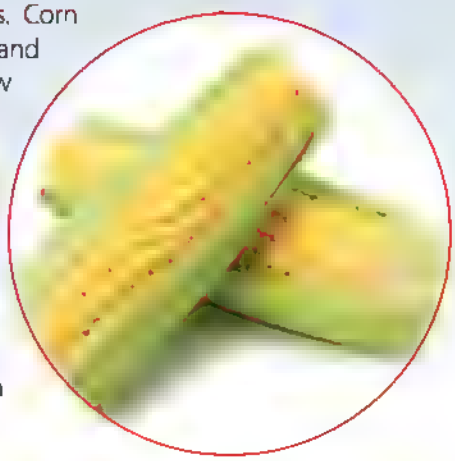
⊘ Disease Prevention: Lowers risk of atherosclerosis, heart disease, stroke, anemia, osteoporosis, cataracts, lung cancer, stomach cancer, breast cancer, bladder cancer, ovarian cancer, colon cancer, colorectal cancer, prostate cancer and potentially many more

❦ How to Grow: In the Brassica family, broccoli is one of the most popular, easy-to-grow vegetables. Start from seed or find good local nursery to get disease-free transplant. Broccoli grows best in cool climates where daytime temperature remains below 70°F. Choose soil that has drainage, good aeration and plenty of sun. Place plant where it will not cast a shadow on another that needs the sun, as broccoli can grow up to 3 feet tall. A pH between 6.2 and 7 is good. If higher, lime the soil to reduce. Mix in well-aged compost or manure. Broccoli has high nutrient demand. Add a couple fistfuls of plant mix with alfalfa, fish bone, and feather meal per yard to ensure nourishment. If you start with seeds, sow them about a month and a half before planting outside. Plant seedlings or transplants 20-30 inches apart. Keep soil moist by watering regularly. (Avoid water logging.) Keep soil weed free by pulling, mulching with organic matter or putting down black plastic as last resort.

✕ Insect Control: Broccoli is affected by many common pests and diseases. Most significant is caterpillar stage of white cabbage butterfly, root maggots, flea beetles and aphids. A plastic row cover protects from the first three. Use an insecticidal soap or limonene spray to repel aphids. Remove pests when you see them. If physical removal doesn't work, organic pesticide is a must. If caterpillars are resilient, spray Bacillus thuringiensis (Bt), an organic agent that is safe for pets, humans and other garden plants.

✓ Tips: When harvesting, cut the central shoot first to promote outgrowth of side shoots. This maximizes production of the edible vegetable portion. When cooking, the crunchier the better. If you let cooked broccoli get soggy, most nutrients are lost. To prevent club root disease, never grow Brassicas in the same plot year after year.

CORN



+ Health Power: More than just a source of starch and carbohydrates. Corn contributes to heart health, lung health, energy production, metabolism and memory. Yellow corn higher in carotene lutein than white corn, hence yellow color. Lutein great for eyes. B vitamin folate helps prevent birth defects and lowers homocysteine in blood, a molecule linked to cardiovascular problems. Phytonutrient beta-cryptoxanthin found in corn (also oranges and red bell peppers) may protect lungs from carcinogens. B vitamin pantothenic acid helps maintain energy by breaking down carbohydrates, fats and proteins. Thiamin helps provide energy and contributes to brain health by helping synthesize acetylcholine, a crucial neurotransmitter for memory and neural function in general. Fiber aids healthy digestion and lowers total cholesterol. Whole grain foods like corn and wheat are rich in antioxidant phenolics, which work in synergy to help deal with adversity and prevent many diseases.

↑ Vitamin and Mineral Content:
Vitamins – B1 (Thiamin), B9 (Folate), C and B5 (Pantothenic Acid)
Minerals – Phosphorus and Manganese

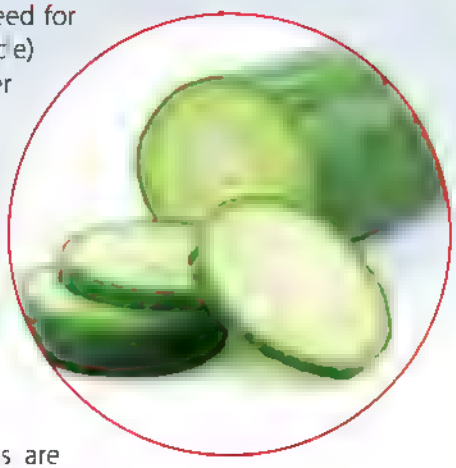
⊘ Disease Prevention: Research incomplete on corn's antioxidant activity and general potential to prevent disease. Nutrients are linked with lower risks of heart disease, colon cancer, lung cancer, macular degeneration and Alzheimer's disease.

❦ How to Grow: Among oldest, most widespread foods. Grows in warm weather. Young corn very sensitive to frost and transplants. Start outdoors after soil warms up. To start earlier, use peat pots so roots are undisturbed when transplanting. Choose plot with full sun in area where they will not shade other crops that need sun. Amend soil well with aged compost or very fertile plant mix. Corn prefers slightly acidic pH. If below 5.5, add lime or dolomite to raise. Pollinated by wind, so plant in rectangles with rows close together. To ensure good pollination, plant 6 or more rows together in a group. Plant seeds outdoors (two in every one-inch deep hole) when temperature rises above 70°F. Space holes 8-12 inches. Cover holes with soil and compress a bit. Water thoroughly. Seeds will start showing after week one of watering. Keep weeds away, especially while plants are young. Cover surrounding area with mulch. Water regularly, especially on hot days. Corn is fully-grown and ready to harvest in about 3 months, when the top hairs turn brownish and kernels are plump.

✕ Insect Control: Corn grown in highly fertile soil usually has few problems. Most common pests are flea beetles, earworms, cutworms and corn borers. Flea beetles are most damaging to young crops by chewing many small holes in leaves. Apply parasitic nematodes to soil. In extreme cases, spray with insecticide like rotenone. Corn borers enter the stalk below the tassel. Look for sawdust-like material next to small holes. Squeeze stalk to kill pest. Earworms feed on ear tips when little hairs emerge from the tips forming tassels. Look for them then and dispose. Cutworms chew on plant base just under surface. Attract ground beetles to eat them by growing ground cover nearby. Dig up area surrounding plant and hand pick or use cutworm collars on transplants.

✓ Tips: Birds and raccoons can also be a problem during seed sowing and harvest. Aside from installing row covers, deter birds by getting rid of standing water, planting mulberry trees to distract them, removing trash and introducing an owl/scarecrow. A barrier (like taping ears to the stalk), night lighting or electric fencing will deter raccoons.

CUCUMBER



+ Health Power: Cucumbers contain silica, a trace mineral, which we need for healthy connective tissue (bone, ligaments, tendons, cartilage and muscle). Silica also encourages healthy skin. Some use it topically for swelling under the eyes, dermatitis and soothing sunburn. Cucumbers are 95 percent water by weight, so eating is a good way to hydrate. Cucumber adds some fiber to the diet, aiding digestion. With vitamins A and C, cucumber helps the immune system and the liver disarm free radicals that cause cellular damage.

↑ Vitamin and Mineral Content:
Vitamins – C, A and B9 (Folate)
Minerals – Molybdenum, Potassium, Manganese and Magnesium

⊘ Disease Prevention: With lower nutrient concentrations, cucumbers are good, but not major, contributors. The magnesium, potassium and fiber may help reduce hypertension. The fiber and water helps avoid indigestion.

❦ How to Grow: Cucumbers grow best in a sunny spot with rich soil. Amend the site with lots of compost or planting mix to achieve a pH close to 6. Sow seeds twice in the year for two harvests. The first one is in small pots indoors in early spring. Place two seeds to a pot at least 3 inches in diameter. Thin down to the strongest seedling if crowding occurs. Keep in a sunny location with moist soil. They should be ready to plant in late spring. Place about 2 feet apart. Make another sowing outdoors about 2 feet apart. If still cold in your area, put cutoff plastic bottles over the sowings to protect from night cold. You can grow cucumbers on the ground or up along sticks. Making a thin tepee with strong sticks looks cool, and it also keeps cucumbers off the ground and reduces their risk for disease, rot or slug infestation. If you plant them in the ground, space them out a little more than 2 feet, as they will grow out like vines. To keep them attached to the sticks as they grow, regularly tie them to the sticks with thick string. When the seedlings are about a foot tall, mulch with some organic matter. Also, trim back the side shoots to encourage growth upward. Pinch the tops of cucumber plants when they reach the top of the tepee. Keep soil moist. Starting roughly half way through growing season, begin fertilizing every few weeks. To produce more cucumbers, harvest cucumbers when young and plant still contains blooms. Failing this, entire plant stops producing.

✕ Insect Control: Popular pests of the cucumber bush include slugs, aphids, and cucumber beetles. To deter slugs, embed a cup of beer in the soil. Slugs and snails fall in and drown. If the plant is big enough and aphids are infesting, spray them off with a strong stream of water. Otherwise, plant French marigolds to attract their predators (hover flies, ladybugs). Inspect all plants and handpick any cucumber beetles when you notice them. You can also wait until later in the season to plant when beetles are on the wane. If they are especially prevalent, you can place row covers over them or, as a last resort, spray with insecticide.

✓ Tips: Cucumbers are mostly water, so letting the plant dry out is not an option. During dry weather, water deep into the soil.

DANDELION

+ Health Power: Is the weed with the yellow flower in your backyard nutritious? Yes. Dandelion greens are a great source of many vitamins and a good source of many minerals. One serving has five times the recommended daily dose of vitamin K. Essential for bone health by increasing ratio of bone matrix development to bone breakdown, especially in the presence of calcium. Antidote for coumarin poisoning (rodent poison) since coumarins block liver production of vitamin K and cause internal bleeding. Greens loaded with antioxidant vitamins A and C, preventing buildup of harmful free radicals in water soluble areas of the body and promoting healthy cardiovascular function. Maintain elasticity in blood vessels and assist in blocking biochemical pathways that lead to plaque buildup. Potassium aids blood pressure by helping blood vessels relax. Enhance liver function, eyesight, immune system function and synthesis of connective tissue. Riboflavin and small amounts of other B vitamins assist in metabolism of carbohydrates, lipids and protein to provide energy or help develop body structure. Diuretic components cause kidneys to produce more urine, removing excess toxins, lowering high blood sugar and lowering blood pressure.

↑ Vitamin and Mineral Content:
Vitamins – K, A, C, E and B (Riboflavin)
Minerals – Calcium, Iron, Manganese, Potassium, Magnesium and Copper

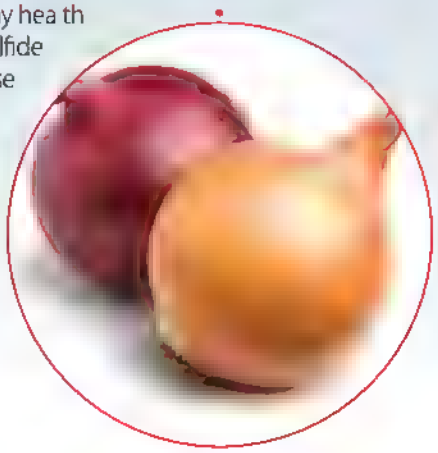
⊘ Disease Prevention: High content of vitamins and minerals may help delay or prevent heart disease, atherosclerosis, rheumatoid and osteoarthritis, osteoporosis and cell damage leading to many types of cancer

How to Grow: We know it as a common weed, but dandelions have an attractive flower. Very tolerant and grow in most soils. If growing to eat, increase nutrition by selecting sunny site, amend soil with compost or planting mix and check drainage. Sow seeds in spring, water during dry weather. Thin out to 6 inches or more between plants to reduce disease risk and provide room for leaf growth. Harvest leaves like other leafy lettuce before they flower and/or go to seed, which leads to bitter taste.

✕ Insect Control: No common pests for dandelions. Usually dandelion is the pest by growing as weed interfering with other plants. Strong taproot makes them hard to remove, which requires completely digging up roots without breaking off.

✓ Tips: When gone to seed, they spread rapidly and germinate. Alternative approach, grow in container to prevent spreading to undesired locations. Many highly nutritious juices and teas come from dandelion. Give them a try.

ONIONS



+ Health Power: Onions have a dense collection of phytonutrients that give many health benefits. These include powerful sulfur-containing molecules like allyl propyl disulfide and a multitude of flavonoids including quercetin. Eating onions can help increase efficient processing of free-floating glucose in the body. Allyl propyl raises free-floating insulin in the blood by preventing it from becoming inactivated in the liver. Chromium also decreases blood sugar by making cells more responsive to insulin, resulting in cellular glucose uptake. Onions are also heart healthy by reducing the amount of cholesterol and homocysteine in the blood, both linked to heart problems. Quercetin is an antioxidant that benefits the colon by protecting against carcinogens. Another onion compound blocks osteoclasts (cells that breakdown bone), which is beneficial for elders whose bone production has slowed. Vitamin C, quercetin and isothiocyanates reduce joint swelling.

↑ Vitamin and Mineral Content:
Vitamins: C, B6 (Pyridoxine) and B9 (Folate)
Minerals: Chromium, Manganese, Molybdenum, Potassium, Phosphorus and Copper

⊘ Disease Prevention: Allyl propyl and chromium act to reduce demand for insulin, which can stave off or help manage diabetes. By lowering cholesterol, homocysteine levels and blood pressure, the vitamins (especially folate) and minerals reduce the risk of atherosclerosis, heart disease, stroke and heart attack. Eating onions regularly has also been linked with lower risk for a number of cancers: esophageal, oral cavity, pharynx, colorectal, laryngeal, breast, prostate, ovarian and kidney. The anti-inflammatory properties help deal with rheumatoid arthritis, osteoarthritis and asthma.

❦ How to Grow: Onions are great to have in the kitchen. They are versatile, store well, come in many different flavors and cook easily. Choose a site full of sunshine. Work in plenty of organic matter in the form of aged compost, manure or planting mix. Best pH is roughly 6.5; add lime to raise if needed. To save space and a few dollars, sow multiple onion seeds together. They grow next to each other and push each other over slightly to make room as they enlarge. Sow 6-7 seeds together. If you want to start early, they germinate well indoors in trays on the windowsill or under a fluorescent light. Indoors, you need to gradually accustom them to being outside before transplanting. Otherwise, sow them similarly in shallow drills roughly 1 foot apart just after spring begins. Thin seedlings to a couple inches apart. Sow the Japanese varieties toward the end of summer in the same way. Fertilize this variety in the spring to encourage the rest of growth. With onions, you must keep beds weed free to minimize nutrient and sunlight competition. Water during dry weather but not overmuch. When tops turn brown, pull or dig up bulbs and let them dry in the sun for a couple days. If weather is unpredictable, put them in shelter to dry out. Once they are dry, remove their tops, and store them in a perforated sack or net in a well-ventilated, warm, shaded place to cure and avoid rot.

✕ Insect Control: Pests are not generally a problem with onions, especially the Allium species. Common pests include onion maggots, onion eelworm and onion flies. Attacking from early to mid-summer, the onion fly can be controlled by hoeing around each plant to expose the maggots to birds. Or put sand around the base of each plant to deter female egg laying. Alternatively, multiple sowing avoids the need to thin out the plants, which prevents releasing the attractive smell to female onion flies. Onion eelworms get inside the bulbs. The only way to get rid of them is to dig up the affected plants and replace for a couple years with something that is not a host (broccoli, lettuce, cabbage or another crucifer). If the risk of infestation is high in your location, interplant onions among other plants to give pests a smaller target to attack. A number of the Allium species ward off pests like aphids, beetles and carrot flies from other garden plants like carrots, lettuce and parsnips.

✓ Tips: For a continual harvest, grow a main crop variety and a Japanese crop that harvests first. To avoid sun burning while waiting for onions to dry on a hot day, cover one plant's bulb with another's shoots.

PEPPERS

+ Health Power: All peppers are a great source of vitamins A and C, which eliminate cell-damaging free radicals. Vitamin A also counters the effects of cigarette smoke, which may help prevent lung conditions such as emphysema. Bell peppers have the B vitamins folate and pyridoxine. Both decrease homocysteine in the blood, blocking the start of a process linked with higher cholesterol and risk of heart attack or stroke. Fiber in bell peppers helps maintain healthy heart function by lowering harmful cholesterol. Bell peppers also have a carotenoid lycopene and beta-cryptoxanthin, also linked to lower risk of many cancers when eaten regularly.

↑ Vitamin and Mineral Content:
Vitamins – C, A, B6 (Pyridoxine), K, B9 (Folate), B1 (Thiamin) and E
Minerals – Molybdenum, Manganese, Potassium and Copper

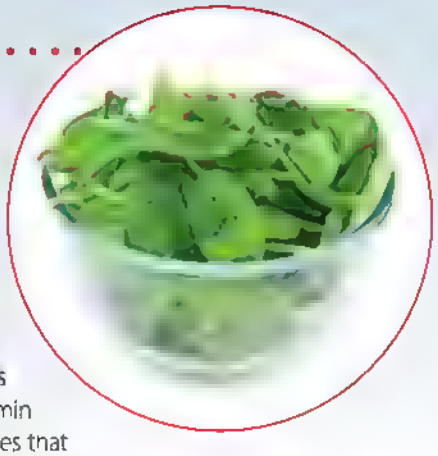
⊘ Disease Prevention: The antioxidant properties of vitamins C and A suppress or prevent the symptoms of atherosclerosis, heart disease, vascular damage, both osteoarthritis and rheumatoid arthritis, emphysema, macular degeneration and the airway swelling of asthma. Regularly eating bell peppers may reduce the risk of cancers of the bladder, prostate, pancreas, lung and cervix.

❦ How to Grow: Peppers are easier to grow than eggplant in cooler climates, but are not frost hardy and do best in warmer areas. They have two main subdivisions, sweet (bell) and spicy (chili). Hundreds of varieties to choose from. The best for your area depends on climate and soil conditions. All peppers prefer warmer climates with lengthy summers. Some are specially bred to handle cooler climates with a cover. Choose a spot with full sunlight. The soil pH needs to be just above 6. In cooler areas, warm up the soil a couple of weeks before sowing by covering the plot with plastic. If starting from seed, sow in a greenhouse or under a fluorescent light. Get them ready for planting outside by gradually exposing them to outside air, starting with just daytime, until they are fully exposed day and night. You need a cold frame to do this, which is a shallow box outdoors with an air-tight framed glass/plastic lid that can be lifted up to expose plants. Or you can get acclimatized transplants from a trusted local nursery. Amend the soil with nutrient-rich planting mix, aged compost or manure. In warm climates with no late spring frosts, plant outdoors 2 feet apart. In cooler climates, cover plants with a frost-proof perforated plastic, called a cloche. Pinch the growing end when the plants reach roughly 6 inches and attach them to a skinny rod for support. Tie side shoots for when they grow out to help support the weight of peppers. Water as regularly as it takes to keep the soil moist as they grow. Apply a liquid fertilizer rich in micronutrients every other week. Harvest the peppers after they plump up. Red and green peppers are of the same variety. You can pick them when they are green or wait a little for them to turn red. With others, harvest when plump and hold a nice deep color. Hot peppers can be refrigerated, frozen or dried in the sun to store for winter usage.

✕ Insect Control: Most damaging are aphids, spider mites, slugs and the white fly. See Artichokes for slug and aphid control. See Strawberries for red spider mite control. The white fly sucks the sap off many plants. Like other flies, they are attracted to the color yellow. To get rid of them, hang a thick piece of yellow paper or plastic with a thin coating of grease, or use old-style flypaper. Make sure to prevent it from attaching to the plants.

✓ Tips: If you are de-seeding many hot peppers to save seeds or to cook, protect your hands with gloves and make sure not to touch your eyes until after thorough washing. Capsaicin is the powerful molecule that causes the burning sensation of pepper. It is insoluble in water and stays bound to the tongue no matter how much water is used to wash it down. Milk and cheese can break capsaicin's bond with tongue receptors if it gets too hot. These varieties will grow in cooler climates: Bell (sweet) pepper: Corona, Canape, Golden Summit, Sweet Banana, Yolo Wonder, Perma Green and Merrimack Wonder. Chile (hot) pepper: Hungarian Wax (hot banana peppers) and Czechoslovakian Black. For warmer climates. Bell (sweet) peppers: Cubanelle, Pimento, Aconcagua and World Beater. Chile (hot) pepper: Cayenne, Anaheim, Jalapeno, Pablano, Serrano, Black Cuban, Holiday Cheer and the very hot Chiltepin.

SPINACH



Health Power: Spinach is remarkable in the myriad of vitamins, minerals, and phytonutrients it gives in one serving. It contains an important carotenoid and a collection of flavonoids that, in addition to vitamins A and C, act as important antioxidants ridding the body of dangerous free radicals. This prevents plaque build up in artery walls by preventing cholesterol from being oxidized. In the end, this helps protect against serious heart problems. Folate and magnesium in spinach also add to heart health by decreasing plaque build up, arterial wall damage (folate) and blood pressure (magnesium and potassium). Because some nutrients are water soluble and others fat soluble, spinach helps resist the growth of various cancerous cells beyond the first day after its consumption. Moreover, nutrients like calcium and Vitamin K add to creating and maintaining healthy bones. The list keeps going with properties that help reduce inflammation in conditions like osteoarthritis, osteoporosis and rheumatoid arthritis. Eating many green leafy vegetables slows down the decline of mental functioning associated with age. Spinach is also an excellent source of iron for helping hemoglobin in blood deliver oxygen to tissues, and lutein that helps maintain eye health. This superfood is a great addition to a meal and an ideal way to promote optimal health. Its effects may be profound.

Vitamin and Mineral Content:
Vitamins: K, A, C, B9 (Folate), B2 (Riboflavin), B6 (Pyridoxine), E, B1 (Thiamin) and, B3 (Niacin)
Minerals: Manganese, Folate, Magnesium, Iron, Calcium, Potassium, Copper, Phosphorus, Zinc and Selenium

Disease Prevention: Spinach may help reduce risks in of heart disease, anemia, arthritis, and cancers of the stomach, colon, prostate, breast, ovaries and potentially many more.

How to Grow: Spinach is a garden must. It's packed with great nutrition and easy to grow. Seeds are commonly found in most local nurseries and are more successful than transplants. Plant and harvest spinach in both spring and fall. True spinach is best for cooler climates, but if you want to plant during the summer in a southern, warmer climate, New Zealand spinach copes well with summer heat. If growing in cooler weather, choose a site with lots of sun; in warmer weather, choose a site with plenty of shade. If it gets too warm, spinach will go to seed and reduce yields. The soil needs to be at a pH near 7. Add lime if it's too low. Soil also must be light, fertile and able to hold water well. Adding organic matter in the form of fully aged compost, manure or planting mix works well. Sow each seed in rows roughly half inch deep, spacing seeds a couple inches apart. Space out rows 9-12 inches apart. Spring sowing should begin 6-8 weeks before the last frost. Summer sowing should start in mid-August for cooler climates, later for warmer ones. Thin the sprouts to 6 inches apart to avoid over crowding and premature seeding. Keep the soil moist and free of weeds. Mulching around the plants after they have grown a bit may help retain moisture and deter weeds. The leaves or whole plants should be ready to pick 7-10 weeks after initial sowing.

Insect Control: Spinach grows in cooler weather and naturally escapes the wrath of many pests. If any, insects that may cause problems are spotted cucumber beetles, leaf miner larvae, aphids, and cabbage loopers. Remove the beetles by hand and dispose of them right away. The larvae of leaf miners embed in the leaves and cause light brown blotches. Remove any leaves showing signs of this infection to stop it from proliferating. This holds true for aphids as well. Remove them or spray with a strong stream of water. Planting French marigolds attracts ladybugs, a natural predator of aphids. If the infestation is too large with beetles, aphids, or loopers, spray with an organic treatment such as insecticidal soap/oil.

Tips: If you want a continual harvest, try consecutively sowing seeds through spring or early fall. If you're looking to get as much iron from spinach as possible, cooking in iron pans or skillets increases its availability. Make sure to harvest the whole plant at the first hint of bolting to stop the plant from putting all its energy into forming seeds, rendering its the leaves tougher and inedible. Lastly, apply a micronutrient rich fertilizer half way through growth. A planting mix containing soluble seaweed extract or fish bone meal will provide sustenance and steady growth.

TOMATO

+ Health Power: A great supporter of overall health. Tomatoes have a lot of vitamins C and A, plus beta-carotene and the pigment lycopene, all super antioxidants that help prevent cell damage by free radical oxygen molecules. These phytonutrients work in synergy with other vitamins and minerals in tomatoes to promote heart and bone health and protect against inflammation and a number of cancers. (The cardiovascular benefits come from helping to regulate blood pressure and reduce damage to blood vessels from oxidative stress, plaque buildup and elevated homocysteine levels.) Regularly eating tomatoes can lower cholesterol levels, promote proper fetal development and regulate blood sugar. The B vitamins help make use of the energy in food

↑ Vitamin and Mineral Content:
Vitamins – C, A, K, B1 (Thiamin), B6 (Pyridoxine), B9 (Folate), B3 (Niacin), B2 (Riboflavin), B5 (Pantothenic Acid) and E
Minerals – Molybdenum, Potassium, Manganese, Chromium, Copper, Magnesium, Iron and Phosphorus

⃠ Disease Prevention: Tomatoes reduce the risk of cardiovascular disease, rheumatoid and osteoarthritis and asthma. They also help prevent cataracts and lower the risk of prostate, breast, lung, stomach, pancreatic, colon, rectal and endometrial cancers.

❦ How to Grow: Plant in full sun, amend the soil well with a good compost or planting mix. They prefer a pH of 6. Tomatoes grow and produce best outdoors. They can also grow in containers (minimum 15 gallons of potting soil) but not to their full potential. More soil volume is best. Start from seed indoors 6 weeks before the last frost, or buy transplants from a local nursery. Plant seedlings or transplants in space at least 2 feet square. Keep the fruit from drooping onto the ground by growing the upright varieties against canes or wire cages. Pinch out the tops after they make 3-4 groups of fruits. For bush varieties, cover the soil underneath the plants (using bark or similar) so fruits develop off the ground. They are heavy feeders and can take copious amounts of fertilizer. Keep plants moist but not sopping wet to avoid fungal diseases.

✕ Insect Control: Tomatoes are susceptible to tomato hornworm. Spray foliage with Bt (Bacillus thuringiensis) for natural control. You can also remove worms by hand early in the morning. Worms are usually on top of the foliage and are easy to remove and discard. As a general measure, you can spray with a botanical insecticide-fungicide for natural control of most insect pests and diseases, such as early blight, gray leaf spot, late blight, Septoria leaf spot, Southern blight and verticillium wilt.

✓ Tips: Pick or buy tomatoes fully ripe, the redder the better. Ripe tomatoes may have 4 times more beta-carotene than green, immature ones. This makes backyard tomatoes the best. You know they were not picked green and shipped to ripen weeks later.

The tips contained in these articles are exerpts from Milo's book, "Healthy Garden, Healthy You". For details on how you can purchase this book, see page 66

Healthy Garden

3 FRUITS

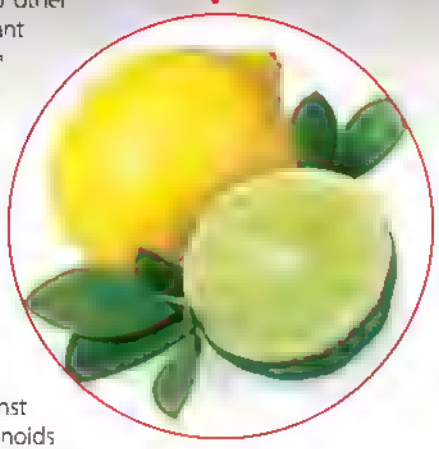
Tips On Growing 3 Common Fruits
From Milo's Book "Healthy Garden, Healthy You"

Healthy You

growing your own fruit

TIPS FROM MILO'S BOOK "HEALTHY GARDEN, HEALTHY YOU"

This article focuses on 9 popular garden vegetables. The full selection is available in Milo's book available at www.milo.pro



+ Health Power: A great source of vitamin C and other phytonutrients, similar to other popular fruits and veggies. Vitamin C is the great immune booster and antioxidant that knocks out free radicals at the top of the inflammatory cascade. Helps reduce symptoms of inflammatory conditions like rheumatoid arthritis. Acting against free radicals, vitamin C can assist in cardiovascular health by preventing the oxidation of cholesterol, a step toward plaque buildup. Lemons and limes both have flavonoid compounds that act as antioxidants, too. Both help sterilize some foods by killing off bacteria. Citrus fruits also contain limonoids that fight a number of cancers and potentially lower cholesterol

↑ Vitamin and Mineral Content:
Vitamins – C
Minerals – Many but none of significant daily value

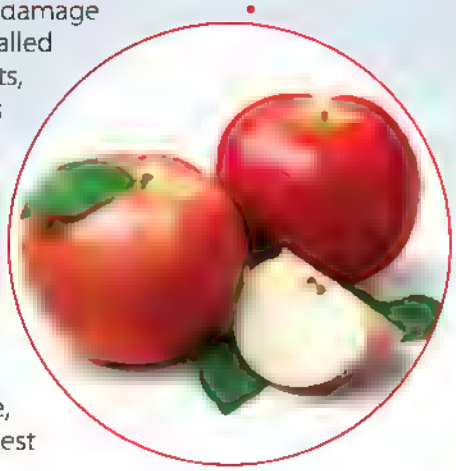
⊘ Disease Prevention: Immune system health and cell protection (possibly against cancer) come from antioxidant concentration of lemons and limes. The citrus limonoids defend against cancers of the mouth, skin, lung, breast, stomach and colon. The flavonoids may prove to protect against many common disease-causing bacteria

❦ How to Grow: Naturally subtropical, all citrus fruits need protection from frost. An exception, the Meyer lemon can handle brief temperatures below freezing in a protected spot. Pick a protected site with plenty of sun. Prefer soil on the heavy side. Amend the site generously with aged compost, manure or highly fertile planting mix. Soil pH should be 6-6.5. Raise beds 1-5 feet above ground. Plant trees any time of the year, especially in the South, but spring and fall are usually best times. Plant tree so that grafting point is a few inches above soil level. Space multiple trees 15-20 feet apart to avoid competition for nutrients or sunlight. Best way to feed is by applying organic fruit tree fertilizers, kelp meal, fish bone meal, alfalfa meal, organic composts or compost tea. Keep tree well watered, especially in first few years. If tree becomes thick and bushy, remove a branch for better airflow and light absorption. Prune shoots that point inward or have dead/diseased spots. Cut fruit off tree when ripe and use or store. To store, place fruit in a container and surround with dry sand or dirt to preserve for several months. Tree produces fruit all year in moderate climates.

✕ Insect Control: Popular outdoor pests include gall wasps. Indoor pests are aphids, scale insects and/or red spider mite. Gall wasps lay their eggs into new shoot growth in spring. Once hatched, larvae embed themselves in shoots, causing unnatural looking swellings (galls) to show up. The only way to control these creatures is to cut out galls when they appear and destroy them. Aphids prefer dry weather. They can be warded off via biological controls such as introducing ladybugs or by growing a plant like marigolds to attract them. Insecticidal soap controls a large infestation. Red spider mites, like aphids, thrive in drier temperatures. Attacks can be prevented by frequently spraying with water. If they attack heavily a controlled spraying of rotenone gets rid of them.

✓ Tips: Once a fruit is removed from a shoot, trim it back to 5 inches to encourage more fruit bearing shoots.

APPLES



+ Health Power: Many effective antioxidants help decrease oxidative cell damage by free radicals. Contain dietary fiber and helpful phytonutrients called flavonoids, which have many different functions. Some act as antioxidants, some help maintain blood consistency without excess clotting; others help regulate blood pressure and reduce inflammation. Fiber stimulates healthy digestion and helps moderate the bad form of cholesterol (LDL), contributing to heart health.

↑ Vitamin and Mineral Content:
Vitamins – C
Minerals – traces

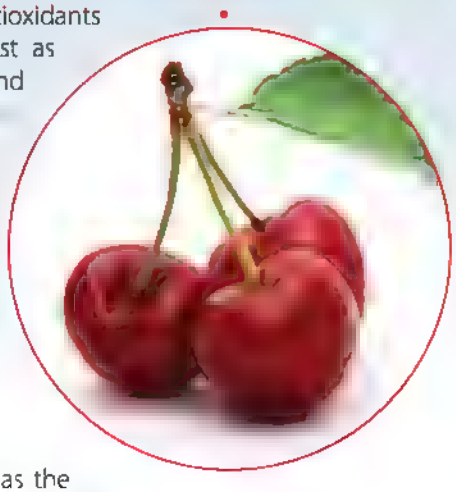
⊘ Disease Prevention: Phytonutrients help reduce risk of heart disease, asthma and female lung cancer. Early studies (lab and animal) suggest apples may reduce risk of colon, lung and breast cancer.

❦ How to Grow: One of the most popular, widespread and easily grown fruit trees in the world. Many different cultivars. Ask local nursery which cultivars best suited for your climate. Apples are self-sterile and need another variety to cross-pollinate to bear fruit. Growers often graft two varieties of a species onto one rootstock to produce fruit from only one tree. Many flavors to choose among. Different varieties best for cooking, eating fresh and making cider. Many patterns to train trees: fans, bush trees, dwarf pyramids, espaliers, cordons, stepovers, festooned trees or standard trees. Plant in spring or late fall. Trees prefer sunny, sheltered site with soil pH just above 6. Add lime to raise pH, if needed. Prepare soil by digging hole large enough to accept tree without altering root structure. Amend removed soil and around hole with organic matter and nutrients like aged compost or planting mix. Plant tree in style recommended for particular cultivar. Usually plants are bare-rooted or container grown. Some cultivars need ground stake for support. Water during dry weather and when apples begin to swell. Stop watering when apples begin to ripen. Apples are ripe and ready when a soft lift and twist removes them easily. Avoid bruising apples during harvest if you want them to store well. Discard any with signs of rot or disease. Store healthy apples, one variety to a bag with holes for airflow, in a cool place that will not freeze. During growth season, remove any apples that appear infected or dead. Thin out branches that block light from reaching interior of tree. Enjoy.

✕ Insect Control: Apple pests are aphids, woolly aphids, winter moths, coddling moth, apple sawfly and wasps. If pests threaten integrity of entire harvest, effective treatments are same as for aphids and sawflies on apricots. See Plums for dealing with wasps. Female winter moths have no wings and must crawl up tree to lay eggs between autumn and spring. Tie a sticky band around bottom of tree trunk during egg laying period. Wooly aphids cover themselves with wax-like lining, making them hard to remove with sprays. For large quantities building up, cut them out. Maggots inside apples probably come from coddling moths. Hang pheromone traps, which confuse males and keep them from finding females to fertilize eggs.

✓ Tips: Apples harvest at two times. Early in summer just before they ripen. Left on tree they get soft and mushy. Harvest later varieties in fall or early winter. Apple trees take about two years to bear fruit. Reapply fertilizer over the roots each spring to stimulate nutritious development. Each winter, pick up fallen leaves to prevent fungus or disease from over wintering next to tree. Note: Eat the skin, which holds the beneficial nutrients. Another reason to grow organic apples with natural, uncontaminated skin.

CHERRIES



+ Health Power: Red color of this tasty treat comes from the powerful antioxidants known as anthocyanins. Cherries packed with free radical destroyers; almost as many as blueberries. Help with pain of inflammatory conditions like arthritis and muscle soreness. Linked with heart benefits by reducing inflammation and total cholesterol, and lowering body fat and total weight. Low in fat, high in water content and helps boost metabolism. One of only a few foods with melatonin. (Produced in pineal gland and associated with sleep rhythms. Cherries may help you get to sleep.) The high potassium content also can help control blood pressure and maintain proper muscle and nerve cell functioning

↑ Vitamin and Mineral Content:
Vitamins – A, C, B2 (Riboflavin), B6 (Pyridoxine), B9 (Folate) and K
Minerals – Iron, Copper, Manganese, Potassium and Magnesium

⊘ Disease Prevention: The flavonoids (anthocyanins and quercetin) as well as the phenolic acid amygdalin in cherries may help lower symptoms or onset of several conditions. heart disease, pain from rheumatoid arthritis and gout, diabetes and other connective tissue ailments. Some studies show a reduced risk for colon and breast cancer by controlling cell-damaging free radicals.

❦ How to Grow: A tasty addition to the garden. Grow well in moderately cool temperatures but not constantly freezing. Many varieties self-pollinate. Must match the cultivar to your area. Consult trusted fruit tree supplier for one that grows well and matches your taste. Varieties are sweet, sour, dwarf and standard. Pick site with plenty of sunlight. Thrive in soil rich in nutrients and organic matter. Soil should be pH 6-8 with moisture retentive, well-drained loam. Prepare soil area of five square feet by adding generous amounts of organic matter and nutrient rich planting mix or well-aged compost. Rock dusts also good to work in, because they continue to release vital nutrients for years. One-year-old trees are best to start. Make sure to allow for space of branches and foliage, usually just over 20 feet in diameter for full-size tree. Dig the hole 6 inches to a foot wider and deeper than the ball of roots in the transplant. Loosen soil at bottom of hole by poking with pitchfork or similar tool. Cut off elongated roots with a clean tool, plant tree and firm in soil around roots. Water until air bubbles stop appearing. Prune tree/s back to around 2-3 feet by cutting slightly above connection to an adjacent branch. Decreasing demand for water and nutrients will buy time for roots to catch up with supply. Shape as desired. Most importantly, cut internal lateral branches close to the trunk to maintain room for air and sun. Other than that, leave them to grow or trim branches similar to peach trees to increase fruit size. Leave cherries on tree as long as you can, but pick before they split. Eat sweet cherries right away. Use tart ones to cook with, bottle or make into jam within a few days.

✕ Insect Control: Birds are main threat to cherries. Plan on losing about 30 percent of crop. If planting only one tree, consider planting a mulberry tree nearby to distract birds from cherries. They love mulberries. (If growing more than one tree, you will have more fruit than one family can think of consuming per season.) Sometimes aphids, winter moth or bacterial canker cause problems. Spray off aphids with a strong stream. Best way to get rid of winter moths: secure a grease band around the tree between fall and spring to stop females from crawling up to lay eggs. To rid bacterial canker, cut and dispose of all infected wood. Then spray copper fungicide three times with one month between applications.

✓ Tips: When planting in windy, more exposed locations, support tree with a stake until trunk and roots are strong enough.

3 EASY STEPS FOR A BEAUTIFUL GARDEN
DR. EARTH
Recipe for Success
WHEN PLANTING ROSES & FLOWERS
FOLLOW THESE THREE SIMPLE STEPS
STEP 1 Plant
STEP 2 Provide
STEP 3 Protect
MIX SOIL
One bag of soil will plant two five-gallon roses, 10 one-gallon flowers, or amend 35-50 square feet of healthy soil where plants will thrive.
FERTILIZE
Feed your prized roses and flowers at time of planting & every 6 to 8 weeks for show quality beauty, color, fragrance, and bud production
SAFEGUARD
Take pride in your stunning roses & flowers by keeping them free pests & diseases with our safe & easy-to-use spray
ProBiotic Inside
NATURE'S INTELLIGENCE PURE & SIMPLE
PEOPLE & PET SAFE
DR. EARTH
Total Advantage PREMIUM SOIL
ORGANIC
100% Natural
Hand Crafted Blend
ALOE VERA
PEOPLE & PET SAFE
DR. EARTH
ORGANIC ROSE & FLOWER FERTILIZER
DR EARTH
FUNGICIDE
DR EARTH
INSECT KILLER

4 FACTORS

4 Factors To Consider When Growing Roses

Sun • Water • Feeding • Pruning

GROWING ORGANIC ROSES
4 EASY STEPS TO RICH REWARDS

Few flowers can compete with the elegance and beauty of roses. Throughout history, and throughout the world, roses have been associated with beautifully maintained estate gardens. The good news is that you don't have to be born rich, or own a large estate, to be able to enjoy a gorgeous rose garden. All you have to do is go to your local independent garden center to find a wide variety of roses you can plant at home and then learn the basic principles.

When you grow your roses organically, they are free of pesticides, herbicides and other chemicals that may be harmful to our family and pets. Organically grown roses offer us the option of using the pedals and other parts of the plant in our food arrangements, making rose tea, distilling rose water, blending potpourri and even concocting homemade cosmetic products. Just the peace of mind that comes with knowing that we are not exposing ourselves to anything potentially toxic is the most important thing. But just as the "organic life" is healthier for us, so is it for the roses too.

EASY STEPS TO RICH REWARDS

Organic roses are fun and easy to grow. We just need to understand their four basic requirements: sun, water, feeding and pruning.

1 SUN

Full sunlight is best, although some varieties still perform well in less sunlight. If you do not have a lot of sun in your garden, the experts at your local independent nursery will be able to recommend varieties better suited for your location. Another advantage you gain by visiting independent nurseries is that they usually offer selections of roses that are not available at the big box stores. Also, I have experienced that they are usually more knowledgeable about roses in general.

2 WATER

Providing roses with the correct amount of water is very important. Please do not use sprinklers to water your roses, even in the morning! I have seen too many diseased roses that have been watered this way. Try to pay close attention to the wetness of your soil. Water if it is dry to the touch two inches below the soil surface.

Higher quality soil will be better able to retain water. Rich soils consist of a variety of organic components such as redwood, compost, peat moss and organic fertilizers. Wet the soil to the point that it looks and feels saturated at a depth of six inches. People often make the mistake of watering too frequently and not deeply enough. This approach will promote shallow root growth, which will make your rose plants less drought tolerant and susceptible to drought stress more quickly.

Deep roots, encouraged by deep watering, have access to more water, primary nutrients, and minerals and will support the production of more blooms in general. Deep roots also develop a more productive association with endo-mycorrhizae.

3 FEEDING

Roses are heavy feeders. They love their nutrients! Try to add as many organic amendments to the soil as you can. Your roses will show you their gratitude by producing an abundant crop of blooms.

It is best to add both amendments and fertilizer to your soil. Amendments come in the form of planting mixes, composts, soil conditioners, mulches, and other coarse organic materials that will directly improve the texture of the soil. They have some nutritional value, but not nearly enough to maximize your roses' growth potential. Dr. Earth® Rose and Flower Fertilizer will contribute greatly to the nutrition in your soil. Dr. Earth® Total Advantage® Rose and Flower Planting Mix creates the ideal soil texture & structure, but more importantly, combined, they contain high levels of nitrogen, phosphorous, potassium, secondary nutrients, micronutrients and ProBiotic®, a champion biological soil inoculant that is perfectly formulated for rosarians who expect the best and demand the most.

Use Dr. Earth® Rose and Flower Fertilizer for a completely balanced diet that contains everything a rose plant will require. Try to work the organic components (amendments and fertilizer) deep into the soil — at least 2 inches to 8 inches for maximum results. Organic nutrients are released slowly, as the beneficial soil microbes digest and decompose the nutrients and convert them into a form that the plants roots can absorb. This is the way nature intended.

Dr. Earth® Rose and Flower Fertilizer contains mycorrhizae, a beneficial soil fungus that develops a symbiotic relationship with the roots of roses and other flowering plants, enabling them to absorb more water and nutrients. Mycorrhizae also contribute to good soil structure and help plants to resist soil borne diseases. All of this happens when we are organic gardeners; we do not have to apply chemicals to our soil to achieve maximum plant potential.

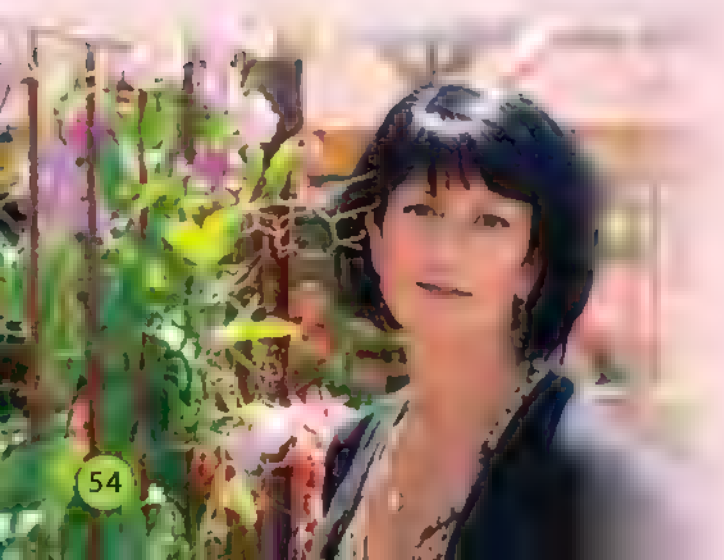
4 PRUNING

Proper rose pruning is essential for a beautiful rose garden. I recommend that if you do not know how to properly prune your rose plants, take a rose pruning class at your local independent nursery. Many nurseries will offer these classes on weekends, free of charge. The more knowledgeable you are on proper pruning techniques, the more successful you will be.

THE REWARDS

Being an organic rosarian is a very rewarding experience. Organically grown roses are easy to achieve, especially after you have built a rich and nutritious soil. Organically grown roses can be more drought tolerant and disease resistant, and require fewer applications of fertilizers, pesticides, and fungicides, because they have been grown steadily without the typical unnatural growth spurts that they experience with chemical fertilizers.

Please consult with your local independent nursery for more advice and tips on growing organic roses. I also enjoy listening to the smart hosts of radio gardening shows like John Bagnasco ad Sharon Asakawa of "Garden Compass" in Southern California, Mike Nowak in Chicago and Paul Parent in the New England area. These gardening gurus know roses and what makes them grow.



Did you know that SWEET PEA plants trace back to the 1690's? Bring a piece of history to your garden. Let love bloom when you plant this romantic plant. They are sweetly scented and will be the darlings of your garden. Sweet Peas remind me of simpler times, and their fragrance enhances the air of any enchanted evening.

Patricia "Sweet Pea" Williams-Shammas
Owner-Sweet Pea's Nursery
SweetPeasNurseryandGifts.com

In many instances, physical and biological controls won't be enough to remedy a pest problem. In these cases you will face the choice of losing your harvest, flowers, and valuable plants or using organic insect sprays.

Organically acceptable pesticides and fungicides have 3 characteristics:

- They are derived from natural substances.
- They are generally less toxic to humans than synthetic pesticides.
- They break-down in the environment to harmless substances.

KILL, REPEL, AND CONTROL NATURALLY

Final Stop® products provide the home gardener with an effective alternative to chemical sprays. Dr. Earth® is unique in it's formulation with components that quickly kill and control the target naturally.

[illegible]

Formulated with essential oils and garlic extract to knockdown and kill insects and fungus quickly, the results can be seen anywhere from immediately to over a period of several minutes. Octopamine is a chemical neurotransmitter that controls body movement and metabolism in insects and mites. The ingredients in Dr. Earth® interfere with the transmission of octopamine signals throughout an insect's body. The interference of these signals leads to metabolic toxicity, immobilization and ultimately death.

LONG LASTING

Garlic extract has been proven to repel insects for several weeks or even longer. We also include several oils and molasses that will naturally stick to plant foliage. This "gummy" carrier causes the insecticide to adhere to plant foliage for a long period of time, creating effective control.

DYNAMIC COMBINATION

We designed the dynamics of our essential oil blend, garlic extract, and specialized inert ingredients to work synergistically, killing insects and fungus within minutes. They also have the ability to repel insects for weeks. Dr. Earth® Final Stop® effectively controls a broad spectrum of insects and fungus's through several active killing agents.

[illegible]

Dr. Earth® insecticides and fungicides are environmentally safe yet contain the most dynamic combination of active and inert ingredients designed to kill and control plant-destroying insects. Our sprays have the ability to not only control insects and fungus but to also rejuvenate plant growth! We have added natural, biological growth enhancers, providing gardeners with multiple benefits. The Dr. Earth® formula offers a new concept: a single product that combines quick, safe control with fast-acting plant growth and healing capabilities.

DR. EARTH PROFESSIONAL KILLER SPRAYS

FINAL STOP®
NATURAL & ORGANIC
YARD & GARDEN INSECT KILLER

IDEAL FOR: Killing and controlling insects on vegetables, fruit trees, turf, ornamentals, walkways, driveways and in every part of the yard and garden.

CONTROLS: Aphids, whiteflies, mites, caterpillars, fleas, spiders, stink bugs, flies, ants, mosquito's, leafhoppers, beetles, wasps, mealybugs, scale, centipedes, earwigs, gnats, silverfish, chiggers, cockroaches, ticks, pillbugs, crickets and other nasty insects.

FINAL STOP®
NATURAL & ORGANIC
VEGETABLE GARDEN INSECT KILLER

IDEAL FOR: Indoor herb gardeners love this formula! Use to kill and control insects on vegetables, both indoors and outdoors, and in every part of the yard and garden.

CONTROLS: Aphids, whiteflies, mites, caterpillars, earwigs, sowbugs, beetles, scale, spiders, ants, leafhoppers, mealybugs, pillbugs, crickets and many other nasty insects that threaten your precious harvest.

CHOOSE YOUR WEAPON & SHOW NO MERCY

FINAL STOP®
NATURAL & ORGANIC
WEED & GRASS HERBICIDE

CERTAIN DEATH

IDEAL FOR: Killing and controlling a broad spectrum of weeds and grasses. Use both directly on plants and walkways and every part of the yard and garden, wherever you want weeds dead. (Remember not to spray weeds in your lawn).

CONTROLS: Crabgrass, foxtail, all broadleaf weeds, poison ivy, poison oak and every [non-desired] plant you want to kill from the top down.

FINAL STOP®
NATURAL & ORGANIC
ROSE & FLOWER INSECT KILLER

KILL FOR A BEAUTIFUL GARDEN

IDEAL FOR: Killing and controlling insects on roses, flowers, flowering shrubs, ornamentals, and every part of the yard and garden.

CONTROLS: Aphids, beetles, whiteflies, mites, rose chafers, scale, caterpillars, earwigs, spiders, ants, leafhoppers, mealy bugs, crickets and many other nasty insects.

THE HIT MAN HAS BEEN HIRED...

FINAL STOP®
NATURAL & ORGANIC
DISEASE CONTROL FUNGICIDE

IDEAL FOR: Killing and controlling diseases, molds and fungi on vegetables, fruit trees, roses, turf, ornamentals, trees, and shrubs in every part of the yard and garden.

CONTROLS: Powdery mildew, rust, black spot, peach leaf curl, shot hole fungus, leaf blotch, scab, dollar spot, brown rot, fusarium blight, botrytis, downy mildew, scab anthracnose, phytophthora blight and many more plant diseases.

FINAL STOP®
NATURAL & ORGANIC
FRUIT TREE INSECT KILLER

IDEAL FOR: Killing and controlling insects on all fruit trees, citrus, avocados, deciduous trees and every part of the yard and garden.

CONTROLS: Aphids, scale, whiteflies, mites, earwigs, caterpillars, spiders, flies, ants, leafhoppers, beetles, mealybugs, pillbugs, crickets and many other nasty insects.

...AND HIS NAME IS DR. EARTH

FINAL STOP®
NATURAL & ORGANIC
PEST CONTROL KILLER SPRAY

SHOW NO MERCY

IDEAL FOR: Killing and controlling insects under sinks, walkways, driveways, basements, between plants on soil, foundations every part of your home, yard, and garden.

CONTROLS: Ants, cockroaches, spiders, fleas, wasps, stink bugs, moths, silverfish, mosquitos, centipedes, earwigs, gnats, chiggers, ticks, pillbugs, crickets and other nasty creepy-crawly insects

FINAL STOP®
NATURAL & ORGANIC
SNAIL & SLUG KILLER SPRAY

KILLING POWER

IDEAL FOR: Killing and controlling snails, slugs, and their eggs. Use on both plants and walkways and every part of the yard and garden.

CONTROLS: Snails and slugs, including their eggs.

Home Grown Nutrition

Home grown organic produce is far more nourishing and healthful than conventionally grown produce

I have been praying for the consumption of home grown foods to increase all over the world. According to the Edibles Gardening Trends Research Report published by the Garden Writers Association Foundation (GWAF), more than 41 million U.S. households (38 percent) grew a vegetable garden in 2009. More than 19.5 million households (18 percent) grew an herb garden and 16.5 million households (15 percent) grew fruits during that period. Gardening has grown more popular for two reasons: money and health. It makes good financial sense to grow your own food, and a growing number of unbiased scientific studies confirm the superior nutritional value of foods grown organically. Organically grown foods, especially those grown at home, have the greatest nutritional value and positive health benefits when eaten as part of a regular diet.

NUTRIENT DENSITY

Home grown organic crops contain significantly higher amounts of phytonutrients compared to conventionally grown foods. Organic produce offers more antioxidants (vitamin C, polyphenols and flavonoids), micronutrients and minerals. Also, when you grow and eat organic food, you avoid or stop exposing yourself to the wide array of pesticides, heavy metals, nitrates and other contaminants in conventional crops. Avoiding contamination and bioaccumulation takes you a giant step closer to good health.

For a long time, I have seen a definite relationship between the methods of chemical fertilization and plant treatment and the poor nutritional quality of conventional crops. Organic produce contains higher nutritional value, or nutrient density, than conventional produce. Furthermore, with home grown produce, gardeners can exercise complete control to restrict or eliminate contaminants like chemical fertilizers, pesticides and herbicides. Therefore, the organic grower minimizes or eliminates the health risks and diseases associated with consuming mono-cultured food crops that are conventionally grown.

Scientists have known the link between human health and soil health for many years. However, many of the giant agriculture corporations that manufacture chemicals also fund or endow the majority of university experiments and testing. This financial relationship between large scale food producers and academic research presents bias barriers to achieving objective research results. Companies that support scientific inquiry and research have a financial stake in cheaper, less healthy forms of food production. Scientific trials pointing to or supporting the positive benefits of organic foods, or the detrimental effects of conventional growing and processing methods, pose a financial threat to established agribusiness interests. If you owned or invested in a huge chemical company that makes fertilizers, pesticides, herbicides or genetically modified products, you would not want to conduct testing to prove that what you sell is inferior and poses health risks. I am an optimist not a cynic, but it is simple human nature in a capitalist economic structure that companies will suppress or avoid revealing evidence that undermines their sales and profits.

If agriculture and food research were done with pure objectivity and an attitude of "Let the chips fall where they may," we would have widespread testing and publicity to show which chemicals are unsafe and should never come near our food and water.

Chem'ca treatments wou'd have to be ret'red Some convent'ona y grown crops would have to be red'rected for sa'e (at significantly reduced prices) to poorer develoPing nat ons that have weaker regu ations

The public hears ttle about the d sparity 'n nutr t onal qual ty of produce and foods grown and processed by d fferent methods. To be fair, some conventiona foods do contain respectab e nutritiona quality Some food crops are ra sed on newer farms where the land has not been overworked for many years. Lands under recent y cleared forest and jung e are still raw, prist ne and nutrient rich However, most soils farmed n the U.S. have been dep eted by destruct ve mismanagement methods over many generations Such land is much less likely to yie d high quality produce.

THE TASTE TEST AND NUTRITION

Have you ever heard a gardener say, "Noth ng can beat the great taste of my homegrown tomatoes?" You may also hear complaints (or experience yourself) that store bought tomatoes have l ttle flavor and are full of water Grocery store produce often does not taste anything l ke the wonderful fru ts and vegetab es many fam'es ate from the farms where past generations lived and grew the'r food

Why are grocery tomatoes so inferior to home grown? Most tomatoes are picked green, transported and refr gerated unripe to help them stay look ng perfect They are a so art'cia y ripened by exposing them to ethylene gas at the produce d str.butor. The result is the mealy, taste ess tomatoes you see in the average grocery produce section.

After growing their own, some gardeners decide they cannot go back to store bought tomatoes. They do not always know why the homegrown produce tastes so much better. Perhaps they just thought it was sweeter for some reason. Maybe they noticed less water in the r p'ants or credited that dark compost they had been adding for years. Home gardeners usually cannot identify a purely scient'fic reason as to why their produce tastes better than what they general y find in the supermarket. Organic gardeners have known what they grow tastes better but they could not prove their produce was better for them. Log'cal deduction suggests if we feed the soil with c ean and pure organic nutrients, we can produce healthier plants. However, not much science was app ied to that reasoning

The sc ence below s simp e to understand Low qua ty produce s easy to ident fy It has low amounts of total d ssolved sugars and low nutr ent content It also does not taste as good or sweet D ssolved sugars are converted to needed energy when we eat them Low nutr ents and ow dissolved sugars equa less ava ab e energy or fuel for our bodies. Conversely, plants w th h gh nutrient content wi have a h gh sucrose content, or br'x eve (Br x 's a measure of the dissolved sugar to water mass rat o Th's is what we associate with a juicy qua ity)

Plants that yie d inferior produce are weaker They transm t an e ectromagnetic frequency n the same range as destruct ve insects. These plants are in a way inviting consumption by pests that occupy a ower level on the food cha n The human intervention of chemical pest control prevents a weak and inferior plant from natura y be ng consumed by pests. Hea thy produce, on the other hand, conta ns a high leve of d sso ved sugars and thick protect ve cell walls These plants do not send s gna s that cry out, "I am sick" to nsects that attack them Hea thy plants em t electromagnet c frequenc es that nsects cannot identify Th's 's a natura deterrent for nsects to consume otherwise healthy p ants. The h gh d ssolved sugar content n healthy plants wi convert to a conol in an nsect s digest ve system and cause the nsects that eat these plants to suffer from d arrhea and dehydration Insects do not have a 'ver as we do and cannot digest these sugars, so consuming hea thy p ants and their sugar content actua ly k ls them. n th s respect, hea thy plants contain a natural pest c de, name y sugar Conserve y, natural sugar is just what we need for energy, health and long l fe

The lesson of this art cle is to trust your taste buds. If a fruit or a vegetable tastes sweet, it probably contains some nutrient density Even when they contain nutrient density, plants treated with the toxins in fert lizers, pesticides and herbic des often carry chemica residues harmfu to human hea th. Home grown or organ c produce is st ll the hea th est choice

BIOAVAILABILITY

Many of the nutritional supplements on the cutting edge of technology get their nutrients from food based ingredients and adding catalysts such as digestive enzymes and probiotics. These ingredients make nutritional supplements bioavailable. (Nutrients are useless to our bodies unless we can absorb them.)

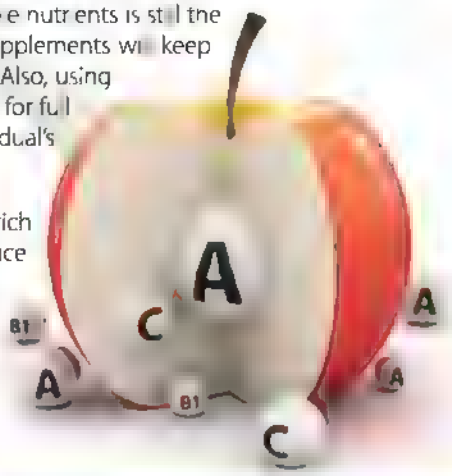
Whole foods provide us with bioavailable nutrients. Because these foods have not been altered, they have the highest potential to readily breakdown in our body for maximum use and value. This is basic biochemistry. The simpler the molecule, the easier it is for us to absorb it. We should try to derive all nutrition from food, because our body was designed to identify those compounds in their unprocessed form. Nature never isolates vitamins or minerals the way so many supplements are isolated in containers and stacked on a store shelf. Vitamins and minerals in nature are available in complex combinations found in the wide variety of food we eat. Nutritionists know our body does not absorb essential nutrients most effectively when taken as isolated USP vitamins or minerals. (USP stands for U.S. Pharmacopeia, a non-governmental, official public standards-setting authority for prescription and over-the-counter medicines. USP also sets widely recognized standards for quality, purity, strength and consistency in food ingredients and dietary supplements.)

Absorption rates are less than 5 percent in some cases. For example, your system may use less than 50 milligrams of that 1000-milligram pill you took. The rest is eliminated. If you want to supplement your organic healthy garden foods, make sure you use food-based ingredients and not synthetic/USP nutrients.

Nothing mentioned above considers simple processed sugars. Avoid foods with high fructose sugars as much as possible, because they are completely bioavailable. This may pose a major health risk. Additionally, the calories in high fructose sugars have no nutritional significance for us, they are "empty." Read the label on packaged foods you buy. Many contain high fructose corn syrup, a sweetener substitute for white sugar.

The term bioavailability refers to the relationship between how much of a nutrient you consume to how much you absorb for use in your body. Bioavailability can vary drastically from person to person based on the beneficial probiotics in the digestive tract and the amount of food rich in digestive enzymes a person eats. Other factors affect bioavailability. How certain foods are cooked and how fast a person chews and swallows affect nutrient absorption. Alcohol consumption, metabolic rate, gastrointestinal disorders or disease, age and state of general health all influence bioavailability.

With our desire to look young and healthy, many of us have gone to a low calorie diet focused on nutrient density and the bioavailability of the nutrients in the foods we eat. The idea is to consume less food but make sure we are absorbing the maximum amount of nutrition from fewer calories. This makes perfect sense and is a logical approach. However, many people still eat junk food and consume cheap supplements in hope that they fulfill the nutritional requirements for a full and energetic life. I understand this reasoning, but healthy food from an organic diet with bioavailable nutrients is still the best and safest way to better health. Simply eating fewer calories and consuming supplements will keep you energized and moving. However, it does not add any long term health benefits. Also, using supplements requires a complete understanding of how nutrients react in our system for full absorption or bioavailability. This requires a study with tests and trials for each individual's unique biochemistry.



To keep things simple, grow as much as you can organically in your backyard in nutrient rich soils. People wanting weight control will be pleased to know that with organic produce you can eat less, because the nutrient density is higher. If you want to take supplements, make sure they are food-based. Complement supplements with synergistic, broad spectrum catalysts such as probiotics and a wide variety of digestive enzymes. These will help your body extract the nutrients in food to make them bioavailable. Grow organic, eat organic and be healthy even when you eat less.

NATURAL LAWN CARE

The way to a lush green lawn begins with an understanding of how lawns grow and a respect for the needs of the grass plants. Misunderstanding and mistakes abound, especially in the areas of mowing, watering, and fertilizing. Let's take a look at these aspects of lawn care.

MOWING

How high or low you set the mower blade is based on the needs of the grass plants at the time, and that can change with the seasons. But one of the biggest mistakes people make is setting the blades too low. Their theory is that by cutting the grass very short they won't have to mow as often. What actually happens is that they are putting the health, and maybe even the life, of their lawn in jeopardy.

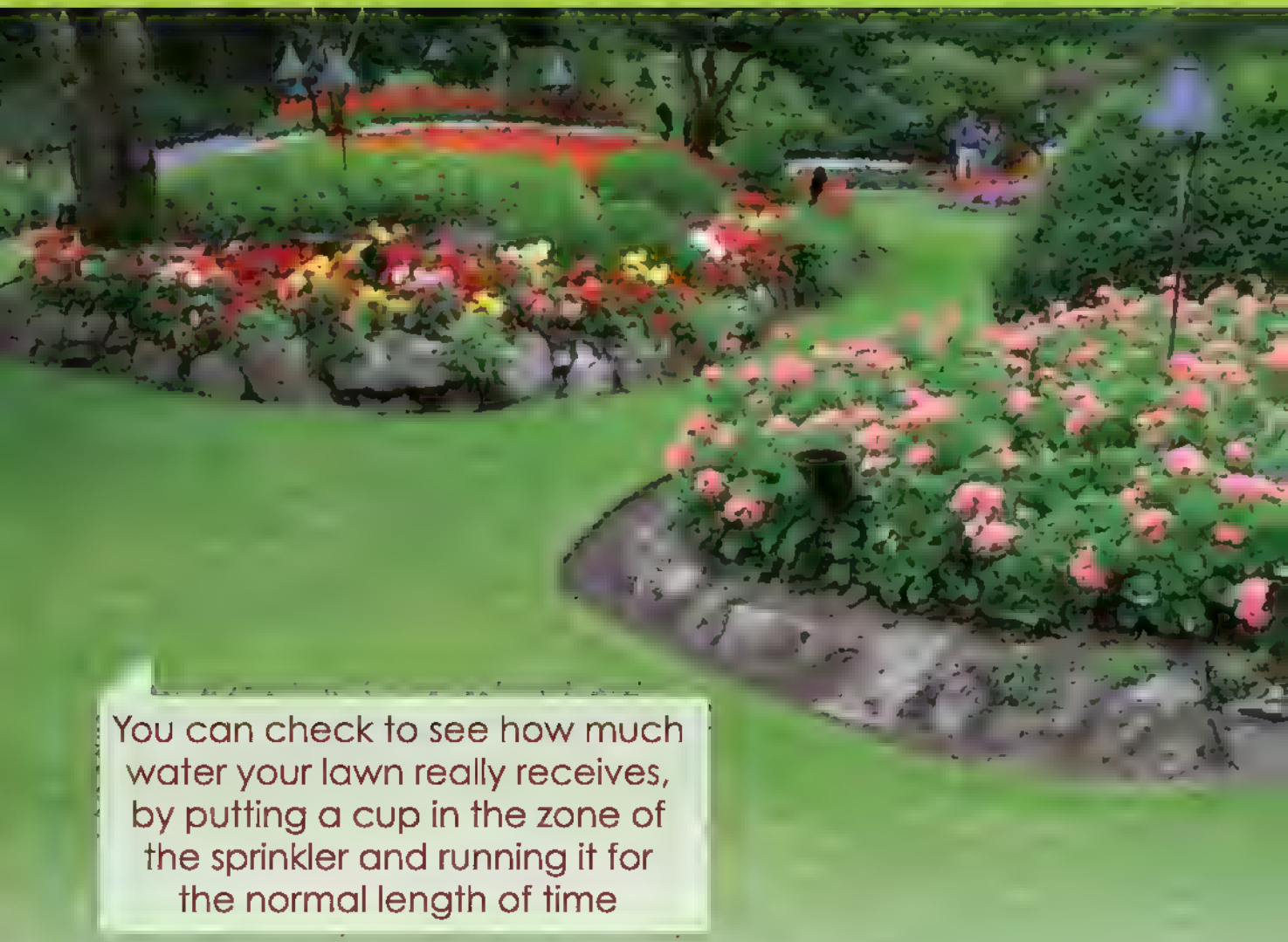
For one thing, photosynthesis takes places in the blades of the grass, creating sugar as a food source for the roots. When the blades are cut too short, the plants are stressed in their attempt to make an adequate supply of sugar and must work harder. The result is actually faster growth. And the way to thicken the turf is to be sure the plants are allowed to make not only enough, but more than enough, sugar. That excess goes into the production of new plants, called rhizomes.

Another factor to consider is the competition between the grass and the weeds. Whichever one gets the most sun will shade the other. Without enough sun plants can't carry on photosynthesis and they die. You want to give the grass the advantage. Longer blades mean better health, and their length and density will allow the grass to outcompete with weeds. With too much shade, weed seedlings, especially, won't stand a chance. Therefore, during the growing season, set your mower as high as it will go. (That is probably 3 to 4 inches.) As temperatures cool and winter rains begin, it's a good idea to then lower the blades a little. The lower lawn height will allow the grass blades to "dry off" faster, helping to prevent fungus and disease.

When you do mow, leave the clippings right on the lawn. As they break down, they add nutritious organic material that helps prevent thatch and feeds the plants.

WATERING AND SOIL pH

As counter intuitive as it may seem, you should water your lawn LESS often for better results, BUT WHEN YOU DO, WATER DEEPLY. That helps to develop grass roots that go farther down into the soil. Grass watered frequently and shallowly develops shallow roots and the many horizontal runners that make up a mat of thatch. If the grass doesn't show any signs of drought stress, it may not need watering. If the lawn has become quite dry, it works better to give it only ½ inch, wait for about 90 minutes, and then give it another ½ inch. Add organic mulch in late spring to help reduce heat stress in the summer. Dr Earth® Natural Choice® Compost makes an excellent top dressing or mulch.



You can check to see how much water your lawn really receives, by putting a cup in the zone of the sprinkler and running it for the normal length of time

You can check to see how much water your lawn really receives, by putting a cup in the zone of the sprinkler and running it for the normal length of time. You should see at least an inch of water in the cup. Have the pH of your soil professionally tested because the inexpensive kits you can buy are often inaccurate. Your local county extension will sometimes test samples for free or for a minimal charge. Add lime, if pH is below 6.0, and add soil sulfur, if above 7.0. A higher number is more favorable to weeds, like dandelions. Grass prefers a pH of about 6.5 - so accuracy matters.

FERTILIZING

Grass consumes high levels of nitrogen. Weeds like clover, which are legumes, can draw nitrogen from the air but grass cannot, so their presence could mean your soil needs more nitrogen. If your lawn needs fertilizer, apply Dr. Earth® Super Natural® Lawn Fertilizer as recommended on the package. This will feed it and supply organic material to the soil for up to 3 months. Dr. Earth® contains ProBiotic®, beneficial soil microbes and 3 species of endomycorrhizae. These living organisms develop a symbiotic relationship with your lawn, helping it to better absorb nutrients from the soil. They also aid in relieving drought stress by absorbing water from a much greater volume of soil.

Beneficial microbes in Dr. Earth® Super Natural® Lawn Fertilizer not only help to digest the organic fertilizer, but also aid in the consumption of thatch. Some of the microbes even produce antibiotic compounds that suppress disease bearing fungal pathogens, preventing them from becoming established in your lawn. The end result is a healthy, productive, weed, drought and disease resistant lawn that will give you years of enjoyment.

SUPER NATURAL® LAWN FERTILIZER

A Safe Place To Play!

100% Organic & Natural Hand Crafted Blend

NO GMOs – Chicken Manure – Sewage Sludge ("Biosolids") to taint the cleanliness or safety of our hand crafted blend.

DESCRIPTION:

Super Natural® is a true pelletized and homogenous organic all-purpose lawn fertilizer that produces remarkable results, because nutrients are released quickly, yet continue to feed for several months. Ultra-premium scientific formula provides optimum levels of primary essential plant nutrients, including micronutrients and multi-minerals. ProBiotic® ensures organic nutrients are thoroughly broken down then released in the soil for grass roots to absorb them as they are needed. Promotes a hardy root system and adds life to your lawn. Feeds for several months.

Infused with ProBiotic®—consisting of "Seven Champion Strains" of beneficial soil microbes and three select strains of endo mycorrhizae— which contributes to drought tolerance, enhanced nutrient availability, and increased plant performance. The Dr. Earth® probiotics are a most complete "broad-spectrum" bio-active package designed to work synergistically with the raw organic nutrients that make up the Super Natural® formula. This spectacular blend actually digests problematic thatch, builds soil health, promotes disease resistance and assists the growth of lush, super-green healthy lawns.

RICH IN:

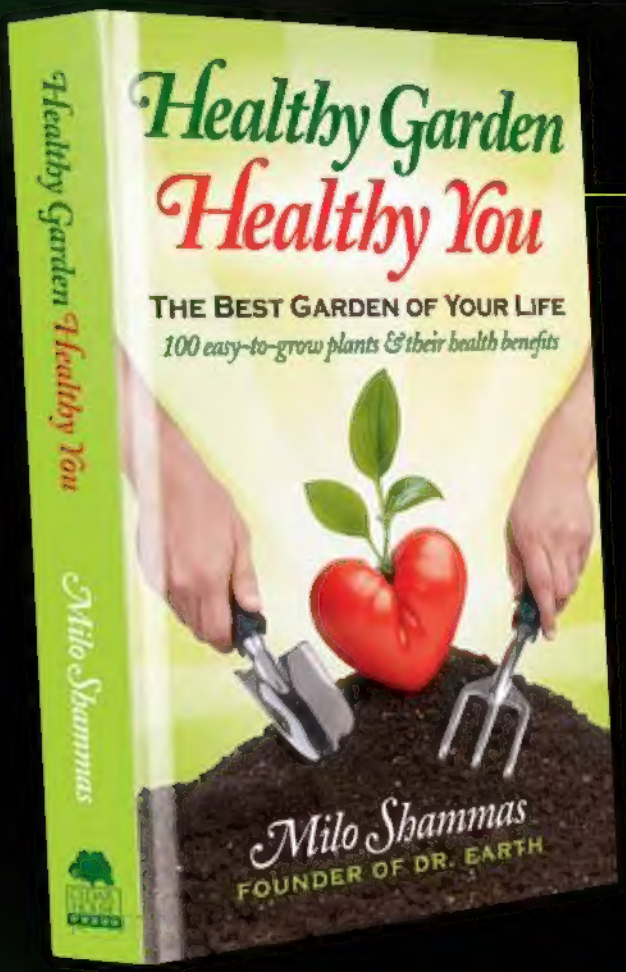
Wild-caught Alaskan Fish Meal, Wild-caught Alaskan Fish Bone Meal, High Country Feather Meal, Naturally Mined Potassium Sulfate, Valley Grown Alfalfa Meal, Calcium Sulfate (gypsum) and MicroActive™ Micronutrient-rich Seaweed Extract.

IDEAL FOR:

Providing balanced and fast nutrition for all lawn types, including new lawns, fescue, bluegrass, ryegrass, St. Augustine, Bermuda grass and both cool season and warm season grasses.

IT'S ALL ABOUT THE SOIL

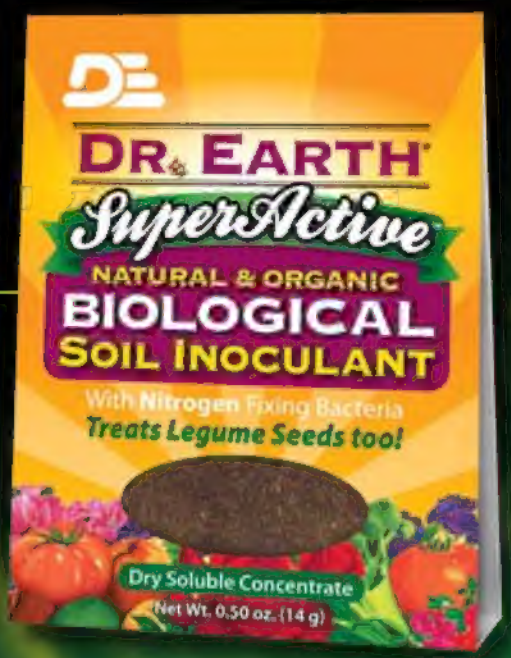
The book to grow healthy and the biology that brings life


Healthy Garden Healthy You
Milo Shammas
Healthy Garden Healthy You
THE BEST GARDEN OF YOUR LIFE
100 easy-to-grow plants & their health benefits
Milo Shammas
FOUNDER OF DR. EARTH

WHEN IT COMES TO THE CONNECTION BETWEEN SOIL HEALTH AND HUMAN HEALTH, MILO SHAMMAS "WROTE THE BOOK" BOTH LITERALLY AND FIGURATIVELY.

A man of passion, focus, and scientific breakthroughs, Founder and Formulator Milo Shammas dedicates his life to sharing this simple truth: ALL HEALTH BEGINS IN THE SOIL! You NEED this book. And after reading it, you'll know you also NEED the exceptional Dr. Earth® products YOU use!

Change your life with Milo's book, available at your favorite independent nursery or visit www.milo.pro



SUPER ACTIVE® BIOLOGICAL SOIL INOCULANT

RETURN LIFE TO YOUR SOIL and inoculate legume seeds for maximum germination and transplant success with SuperActive™ Soil & Seed Inoculant. Simply mix as an inoculant "tea" that will travel deep into the soil structure for maximum root coverage and soil penetration, giving remarkable results.

PREMIUM LIQUID FERTILIZERS
ADVANCED PLANT NUTRIENTS

100% Organic & Natural Liquid Blends Handcrafted with Micronized Essential Nutrients. Loaded with bioavailable multi-minerals. Juiced-up for maximum Growth.

Advanced - Liquid Solution™ and **SEAWEED EXTRACT** are powerful liquid fertilizers formulated to work fast anytime of the year. DELIVERS bioavailable liquid blends, they are not dependent on temperature for effectiveness. Micronization ensures that organic nutrients are thoroughly available for root absorption on the microscopic level. Gardeners love our easy-to-use liquid solutions; you simply mix with water and apply to the soil, foliage, or hydroponic systems.

LIQUID SOLUTION™

Micronized Essential Nutrients loaded with bioavailable multi-minerals

Liquid Solution™ is a powerful liquid fertilizer formulated to work fast anytime of the year, regardless of temperature. Nutrients are released quickly, yet continue to feed for several weeks. Ultra-premium scientific formula provides optimum levels of primary essential plant nutrients, including micronutrients and multi-minerals. Micronazation ensures that organic nutrients are thoroughly available for root absorption on the microscopic level. Very easy to use; just mix with water and apply to the soil or foliage.

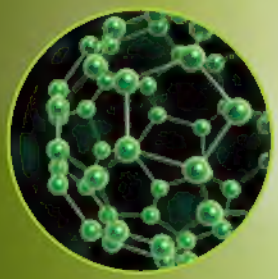
DR. EARTH® SEAWEED SUPER CONCENTRATE

Micronized Seaweed loaded with OVER 70 bioavailable multi-minerals

Dr. Earth® Seaweed Super Concentrate is a powerful liquid fertilizer formulated to work fast anytime of the year, regardless of temperature. Nutrients are released quickly, yet continue to feed for several weeks. Ultra-premium concentrated formula provides optimum levels of potassium and naturally occurring multi-minerals (synergistically boosted with micronized humic acids for maximum bioavailability and superior bud production.) Micronization ensures that organic nutrients are thoroughly available for root absorption on the microscopic level. Very easy to use; just mix with water and apply to the soil or foliage.

Available in Pint, Quart or Gallon Containers

DR. EARTH®
METABOLIC TRANSFORMER®



MAKES 44 GALLONS
DR. EARTH
ProMoisture Hydrate® & PreBiotic®
Plus Super Concentrated ProBiotic®
METABOLIC TRANSFORMER®
Natural & Organic CATALYST For All Soil Types!
Hand Crafted with Pure Essential Amino Acids & Balanced Carbohydrates
NET WT. 1 LB. (0.453 KG)

BEHOLD THE DISTILLATION OF TRUE INNOVATION

After revolutionizing an entire industry with one breakthrough innovation after another, Founder and Formulator Milo Shammas now offers you his VERY BEST, the ultimate combination of all his formulating experience manifested as one rare and precious product. Dr. Earth® proudly introduces METABOLIC TRANSFORMER®. Here is your opportunity to profit from the most exotic, comprehensive, and potent plant health product the world has ever seen!

AWESOME POWERS COMBINED

Milo Shammas invented ProBiotic® based on "nature's intelligence" and his understanding of the complex relationship between soil and the root systems of plants. Twelve years later came his next innovation, ProMoisture Hydrate® with Aloe Vera, to "keep the intelligence alive." Now, with METABOLIC TRANSFORMER®, he combines ProMoisture Hydrate® with super concentrated ProBiotic® to create a CATALYST for AMAZING results in any soil type.

THE EXOTIC INGREDIENTS

ProMoisture Hydrate® Arizona Aloe Vera - ProBiotic® Micronized Beneficial Soil Microbes & Mycorrhizae - Northern California Hemp Protein Powder - Brown Rice carbohydrates - Soy Flower Amino Acids - Norwegian Kelp Flower - Alaskan Seaweed Extract - Whole Wheat Carbohydrates - Wild Caught Deep Sea Fish Bone Meal - Extra Virgin Black Strap Kentucky Molasses - North Texas Yucca Extract - Ancient Lignite Humic Acids - Green-fed Earthworm Castings - North Dakota Mined Colloidal Soft Rock Phosphate - Utah Mined Potassium Sulfate & Wisconsin Whey Protein blended with 100% pure Love!

DR. EARTH

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